

Field Book
of
Willis Linn Jepson

If lost finder please return to
W.L. Jepson, 11 Mosswood Road, Berkeley,
California, and receive reward.

Sw. Tehama Co., May 9, 1932
near ely (see p. 10). c. 700 ft. 1

From the summit of the outer
range of foothills we run
down through a Blue Oak belt
(*Quercus douglasii* HBK.) which
is very fine and very extensive.
We stop to see what species
is an *Arctostaphylos* shrub
and collect the following nos.:

✓ No. 16,332. *Arctostaphylos man-
zanita* Parry. Individuals few
and scattered.

"No. 16,333. *Daucus pusillus* Michx.
This umbellifer grows in
open oak woods.

"No. 16,334. *Linanthus* ^{*androsaceus*} ~~*paris-*~~
florus Greene. Openly wooded oak flats.

"No. 16,335. *Brodiaea* ^{*Triscalcia*} *ixioides*
with 16,333.

"No. 16,336. *Brodiaea pyramithina*
with 16,333.

- ✓ No. 16, 337. *Conoclinium microcarpa* H. & A.

This umbellifer grows in the open oak woods.

- ✓ No. 16, 338. *Trifolium bifidum* Gray
var. *decipiens* Greene

- ✓ No. 16, 339. *Brodiaea multiflora*
= *Dichlostemma*

- See p. 10.

- We run ^{on} and after a bit pull into a Blue Oak stand a little off the road and have lunch. We collect here the following no.:

- ✓ No. 16, 340. *Githopsis*

We run into Red Bluff, take on gas and oil and water, cross the Sacramento River on the Chico road, turn off it in a few miles onto the Chester road. and after some distance, one or two miles, we stop to see what is the nature of

a white flower that fills the fields. I guess it to be *Odontostomum hartwegii* and it proves to be. I have known ^{it} as occurring in a few stations, scattered individuals - but here it forms a thick stand, colonies of 20, 30, 40 acres where it is the dominant. This region is evidently the center of its distribution:

- ✓ No. 16, 341. *Odontostomum hartwegii* ~~Fort.~~ Bulbs exceedingly deep-seated and difficult to get out of the gravelly red soil. Thousands of bees hum in the colonies, so that my note on the biological significance. ^{"habitation"} of the fl. has a

- ✓ No. 16, 342. *Microseris bogdanii*
Extremely abundant on the clay flats; 2 ms. of Red Bluff.

* That is, it whitens the slopes and flats.

Tehama
400.

Red Bluff, May 9, 1932, 340 ft.

- (2 mi. N.E.)
No. 16,343. *Minimus tricolor* Hartw.
Beds of vernal pools.
No. 16,344. *Brodiala minor* Wats.

This species is exceedingly abundant on the red gravelly flats. It is low on the ground, the scape filiform! (very slender), the perianth segments exactly rotate. I regret not getting more of it. Some spurs in the hurry were lost. Stamens 2 times anthers, cleft at apex.

- No. 16,345. *Eschscholzia ~~schomburgkii~~* Jepson Fl. W. Mid. Cal. p. 208 (ed. 1).
= *E. lobbia* Greene!! as in Jepson, Man.

- No. 16,346. *Filago gallica*
dry flats.

"Rubble Field" N.E. of Red Bluff, May 9, 1932
(near 2-mile creek) 450 ft. 3-4 mi. by road.

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We drove on northerly and soon came to the "rubble field" which I have previously referred to. We collect here the following:

- No. 16,347. *Navarretia*
No. 16,348. *Astragalus tener* Gray

- No. 16,349. *Gilia tricolor* Bth. var.
longipedicellata Greene.

- No. 16,350. *Chorizanthe polygonoides* ~~Greene~~ ^{Gray}.

Per. segments broadly oblong, truncatish or retuse, the inner a little narrower, all a little wider at base. Color = flesh-color or pinkish. Anthers brick-red or magenta. Dry gravelly or rocky flats, perfectly prostrate.

Linanthus bolanderi Greene, not

- No. 16,351. *Gilia* (*Linanthus*) *filipes* (Greene) ~~not~~ ^{not} *filipes* Bth.

- No. 16,352. *Trifolium microcephalum* Pursh.

6 Red Bluff, "rubble field" nr. of, c. 450 ft. Tehama Co. May 9, 1932.
near Seven Mile Creek. 3-4 mi. by road.

No. 16, 353. *Brodiaea laxa*

No. 16, 354. *Ligipappus*

This composite is quite inconspicuous but probably it is very common through all the northern country covered on this trip.

No. 16, 355. *Navaretia subuligera* Greene.

No. 16, 356. *Microseris acuminata*

No. 16, 357. *Pogogyne zizyphoroides* Bth.

No. 16, 358. *Sedum parvisectum* *pumilum* Bth.

No. 16, 359. *Lomatium* = *Leptotaenia humilis* C. + R.

No. 16, 360. *Allium amplexans* Torr. det M. C. Ambrey 1950.
Per. withing bladder-like over ovary.

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No. 16, 361. *Cryptantha flaccida* Greene.

No. 16, 362. *Delphinium variegatum* P. & G.

No. 16, 363. *Psilocarphus brevissimus* Nutt.
This involid in a moist spot.

No. 16, 364. *Allocarya greenii* Greene.
This borage grew in a moist spot on the rubble field.

No. 16, 365. *Plagiobothrys shastensis* Greene.

- We run back off the rubble field and take the Chico road, passing the magnificent grove of *Quercus lobata* on the valley bottoms opposite Red Bluff.

About opposite Coma, but on the Chico highway I notice by the way a large flowered *Brodiaea* - larger than ever before seen.

It is undoubtedly *Brodiaea californica* Lindley - the Hartweg type of which is No. 326. I worked it out as ^{long ago} probable that this number was collected near the present settlement of Cana in Butte Co. (cf. Fl. Cal. 1:289).

It is therefore extremely interesting to find it in abundant flower near Cana on the adobe plain, namely:

No. 16, 366. *Brodiaea californica* Lindl. Perianth blue-purple, its segments over twice as long as the per.-tube. Segments not spreading, not erect but half-way between, that is ascending and so presenting an appearance very different from that of any other *Brodiaea*. The stamens are amazingly long, 9 lines!, that is $\frac{3}{4}$ as long as the segments or longer; they are truncate at apex with a slight

speculation. The stout pedicels are rather short. The plants are low. The corolla are large and heavily fibrous-coated. 190 ft. circa.

we travel a few miles further ^{on Red Bluff - Chico road,} and stop to collect in a low spot, the following: - 190 ft. -

No. 16, 367. *Pogogyne douglasii* Bth.

No. 16, 368. *Evax caulescens*

No. 16, 369. *Sidalcea diplosypha* Gray.

No. 16, 370. *Microseris douglasii*

- Cont. from p. 2. All this hill country is very green - very green for this time of year. *Brodiaea isoides* is extremely common everywhere on the flats.

- Cont. from p. 1. Ely. My collecting station cannot be far in miles ^(1 or 2 miles) from the settlement marked Ely on Denny's Pocket Map of Tehama Co. I did not see Ely to recognize it: a house or two only, probably.

- Teratology - of *Sidalcea malvaeflora* Gray. Cf. East Oakland, Grace Edson in Rb.

- P. A. Munz, Pomona College, is here working in the herbarium on his Flora of Southern California. Passing his table in the herbarium I could not but note that the only books spread out above his manuscript pages were Jepson's Flora of California, and Jepson's Manual.

- June 30, 1932. Jepson, R. W. Univ. Cal.,
Mrs. H. P. Bracelin said he was making tags.

- Strawberry Creek is running as a distinct little brooklet. This is the first summer it has not been dry in many (perhaps ten) years. - July 1, 1932.

- P. A. Munz has a bit to say about Mr. E. Jones, that his wife supported the family in great part. Jones was a "mining expert" for the Denver and Rio Grande railroad. In running new lines the road wished to know what mines were really rich and would ensure a certain amount of traffic. Jones did a lot of collecting while on such work. He projected a flora of the Great Basin and worked on it. He complained bitterly that he

could not support his family at the ^{same} time. He said that if he only had five years free from family burden, he could do the flora. So Mrs. Jones said that she would support the family and did so for five years, by keeping borders, and continued to do so after the five years. But Jones found the task greater than he expected; there were distractions and he made no real progress on the task.

When he leaves his wife he is quite silent as to her support of the family! - July 2, 1932

- The Teton Region.

So wonderfully interesting because Great Valley elements ^{thrust} through the pass into the Tulelake Valley area; contrariwise, lots of desert elements come through into the upper San Joaquin Valley and along the Tumbler Range to the Carrizo plain.

Redwood on Howell Mt.

A most fascinating assemblage. Certain species go along with the Redwood as in its neighborhood: *Quercus garryana* occurs on Howell Mt., no place at all for it in a sense, too far inland! but the Redwood is there! On the east slope of Howell, one stands among the Redwoods and looks out over the Berryessa Basin, interior country, to the semi-arid inner Coast Range whose long even ridge, bounding the Sacramento Valley, closes the eastern horizon. It is the only spot where Redwood is found on a tributary of the Sacramento River! Here, along this east side of the Napa Range elements of the Sierran flora swing down from the north from around the head of the Sacramento Valley.

in a thin band! - July 2, 1932.

Vaca Mountains

It is of much interest as to what is absent in the way of species from its vegetation:

- *Quercus oregona*, I have never found. Yet it occurs along the Sacramento River in the eastern part of the county.

- *Pinus ponderosa* occurs on Howell Mt. to the west but not at the present time in the Vaca Mts. Yet some of its associated species, as found to the west, occur here:

Betula papyrifera.

Salix menziesii.

July 22, 1932.

- Left home 11:30 on my way to Bull Creek. Driving through Napa Valley one tastes again the pleasures felt in Child Hood - the delights of this wooded valley. There is a wildness not found in my home Vaca Valley region; there are far more trees, both on the valley floor and on the hills; it is a better watered region than my dry land and its fields, meadows, ^{and} stream courses have more tangle of vegetation. The foothill bases ^{distinct} thrust ^{sugar-tops or hillsides} out ^{onto} the valley ^{into} ^{rooms} wooded and wild, these produce an effect of great charm. There is a conical ^{hill right} there, rising from the side of the wagon road, perhaps only 75 or 80 feet high, but its summit and sides forested with Douglas fir, Madrone and Maple, its lower part cleared for the ^{Big-leaf} ordered rows of a vineyard. It is delightful to look upon.

There is so much maple here, too. While in my land there are only a few scattered individuals and none on the valley floor unless a more one at the very base of the hills.

Through Knight Valley I go on to Litter, take on water, on to Cloverdale and take on gas, on to Ukiah for the night.

The next morning I go on to Willits. South of Willits, about 2 mi. at the base of the hills, I collect the following:

No. 16,371. *Hamizonia clevelandii* Greene
White-flwd. whitening the
flats a bit.

No. 16,372. *Graphalium palustre*
Moist stream bottom.

No. 16,373. *Navarretia squarrosa*
H.S.A. Dry bank.

No. 16,374. *Rubus*

On stream bank in an
apparently wild spot.

No. 16,375. *Lythrum hyssopifolia* L.
Moist creek bottom

- Walker Valley: *Arctostaphylos*
manzanita Parry. *Eriodictyon*
californicum. See p. 47 re. *Vitis californica*.

- Along South Fork Eel River in
Humboldt Co.: *Sequoia sempervirens*,
Populus trichocarpa, *Vitis californica*
Bth., *Aesculus californica* Spach
in association at Rocky Glen
Creek

- Stopped at Wood cottage, a few
miles s. of Orinda, to see Professor
Emanuel Fritz, who is here for
the summer continuing his studies
on Redwood. Went on north to
Ogenville and put up at head-
quarters Redwood Parks. In the early
days of ^{State} wagon roads the only
road from the south into Mendocino
Co. was the one over the Bella
Spring ridge (which I followed in
1902), save the coast road. The
road by Bella Springs and Harris

comes down to the main Eel River and crossed the South Fork Eel at Dyerville, in 1890 and thereabouts by a ferry. The patriarch, I am told, who kept the ferry, had a long beard and smoked a pipe. If you came along, and signalled for the ferry when he was smoking his pipe, he finished his pipe before bringing you across.

The next morning, Sunday, July 24, Prof. Fritz, comes to Dyerville, and we drive up the main Eel to McCoun's sta., a split-tie assembly place, on to the Camp Grant neighborhood, ^{climbing} over the river bluffs or headlands. Near Camp Grant I collect in the Redwoods ("Mystery of the Forest" grove) the following:

no. 16, 376. *Viola glabella* Nutt.
depths of redwood.

Humboldt Co.

March/arganum (T. & G.) Humboldt

no. 16, 377.

Echinocystis arganum

Stem trailing over ground, 30 feet long, by actual tape measurement!

no. 16, 378. *Equisetum arvense* L.

Colony on moist shady bank of ^{main} Eel River. No "cones"
no. 16, 379. *Erechthites preanthoides* (Rich.)
D. B. Lower leaves dentate! Colonies

common in opens in the redwoods

no. 16, 380. *Agrostis exarata* Trin.

(det. Beecher Crampton, 3/76)

This grass grows on moist banks of the river in rather heavy shade.

no. 16, 381. *Deschampsia elongata* (Hook.) Munro ex Benth.
(det. Beecher Crampton, 3/76)

This grass grows with 16, 380.

no. 16, 382. *Ceanothus velutinus*, var. ^{Dough.}
laevigatus T. & G. Common about Fruitland. This

specimen taken from a stem 18 ft. h. l., 3 in. diam. Humboldt Co.

no. 16, 383. *Campanula*

or at least not very dense open woods, Fruitland.

No. 16, 384. *Ceanothus integrifolius*
H.A. var. *californicus* (Keil.) Benson
Mail Ridge, near Fruitland.

No. 16, 385. *Brodiaea*

Mail Ridge above Eel Rock.

grassy
dry. opens.

No. 16, 386. *Navarretia togetina* Greene.
with 16, 385.

No. 16, 387. *Daucus pueillus* Michx.

This umbellifer grows with
no. 16, 386.

No. 16, 388. *Ceanothus parryi* Treb.

It is abundant on the Mail
Ridge from above Camp Grant to
Fruitland and on to our next stop
which is on the Mail Ridge summit
a little above Eel Rock on the Eel.

It has a ^{dry and but} habit, with straight
somewhat divaricate branches, perhaps
better to say, spreading branches,
but all the ^{somewhat} branches very straight,
that is distinctive and is dif-
ferent from the branching in
C. thyrsiflorus Esch.

(cf. Systematic Botany notebook, p. 124)

No. 16, 389. *Ribes roezlii* Regel var.
~~cuneatum~~ Jepson. with 16, 388.

No. 16, 390. *Sambucus lanca* Nutt.
— See p. 94 for other coll. on Mail Ridge.

The Mail Ridge, the Fort Seward
Ranch Ridge of my Field Book of
1901, is still a delightful mountain
way. Away to the east, north and
southeast are fine views of the
complex of the mountain ridges
lying above the water systems of
the rivers hidden in the cañon
valleys. Far to the east the long
unbroken ridge of the inner North
Coast Range comes into view, capped
at the north by the huge bulk
of North Yolla Bally. The air is
clear — no smoke or haze east or
west. There is a slight patch of
snow visible on North Yolla Bally,
even at so great a distance. West
the mass of Kings Mt. is the

great landmark along the coast.

— We turn off the Mail Ridge and descend west towards Garberville. On the Tooley Ranch, at a spring apt on the "bald" slopes, I collect:

No. 16,391. *Baccharis douglasii*

DB. Forms a very dense and pure circular colony 30 feet across. Makes a marked spot on the mountain side.

No. 16,392. *Juncus*

On the margins of the *Baccharis* colony; see no. 16,391.

No. 16,393. *Juncus*

No. 16,394. *Heterocodon* With no. 16,392.

— We go on to Garberville, thence via the Redwood Highway to Miranda or rather, south of Miranda, to the Wood cottage where I have dinner with Professor Fritz and his family: Mrs. Fritz and their two girls Roberta and Barbara.

No. 16,395. *Eriogonum vimineum*
var. *virgineum*

River gravel bottom. Corollas pink-red.

No. 16,396. *Pentstemon corymbosus*

Bth. Gravelly flat. See *

No. 16,397. *Mentzelia laevicomis*

F. 12. Gravelly river bottom.

No. 16,398. *Chrysopsis oregana*

Gray. Gravelly river bottom.

No. 16,399. *Habenaria elegans*
(Lindl.) Boland. Lower lip at base produced into a collar or cup which is continuous in a circle save where interrupted on the upper side by the stamen-column. Bull Creek.

No. 16,400. *Whipplea modesta* Torr.

Shade of woods, on a bank getting some sun. Bull Creek.

* Stems spreading or ascending from the root-crown, forming a circular plant about 2 feet across.

- Morton, the postmaster at Dyerille, expresses his belief that the cutting of the Redwood timber on the ^{Eel} River between here and Scotia, especially on north side, has changed the climate here at Dyerille, resulting in more wind and rarer weather. He says that when a Redwood falls, the trunk of which is weakened throughout by dry rot, it makes little noise; it breaks up like an egg-shell, whereas a sound tree makes a resounding crash. He speaks of two kinds of Rhus: Poison Ivy and Poison Oak. By the former he means the climbing kind of *Rhus diversiloba* conspicuous on Redwood trunks, by the latter the erect bushes of *Rhus diversiloba*. He regards Poison Ivy as more virulent than Poison Oak.

- No. 16,400a. *Chenopodium batryx* L.
Sand bar.
- No. 16,401. *Trifolium microcephalum* Pursh. Sand bar.
- No. 16,402. *Phacelia bolanderi* Gray.
Serry - glutinous. Stamen filament dusky, slightly dilated towards middle where provided with about 9 to 12 scattered spreading bristle-like hairs, the hairs straight or angularly bent. Sand bar.
- No. 16,403. *Cirsium arvense* Scop.
Dense colony, 5 to 6 ft. h., sand bar. Corollas pink-purple.
- No. 16,404. *Juncus*
Shady creek bank.
- No. 16,405. *Madia gracilis* (Nutt.) Keck
Shady creek bank.
- No. 16,406. *Polystichum muritum* Presl. Shade of woods. On the south bank of Bull Creek in the flat

this fern often grows 5 ft. h.

- No. 16,407. *Petasites palmata* (Ait.) Gray.
Forms a dense colony 25 ft.
long at south bottom of Bull Creek.
Leaves, as much as 1½ ft. wide.
No fls. at this time. Largest leaves
20 in. wide. (material sterile-
discarded.) 12/22/60
R.C.B.

- No. 16,408. *Horacium albiflorum*
Shady bank

- No. 16,409. *Erigeron philadelphicus* L.
Rays lavender. Not common.

- No. 16,410. *Agrostis semiverticillata*
(det. Beecher Crampton, 3/76)
This grass grows on the
shady banks of Bull Creek.

- No. 16,411. *Carex* unket.
with 16,410.

- No. 16,412. *Adiantum pedatum* L.
Shady bank, not common, lower Bull
Creek.

- No. 16,413. *Campanula prenanthoides*
Dur. Shady woods. Lower Bull
Creek.

- No. 16,414. *Oxalis oregana* Nutt.
Shade of redwoods.

- No. 16,415. *Carex*

- Bull Creek.
No. 16,416. *Claytonia sibirica* L.
~~*Montia sibirica* (L.) Howell.~~
Shade of redwoods, lower Bull
Creek.

- No. 16,417. *Tiarella unifoliata* Hook.
Shade of redwoods.

- No. 16,418. *Stachys rigida* ssp.
quercetorum Shade of redwoods.

- No. 16,419. *Osmorrhiza nuda* Torr.
Shade of redwoods.

27 July, 1932

- No. 16,420. *Trisetum cernuum* Trin.
(det. Beecher Crampton, 3/76)
This grass grew in the
depths of the heavy Redwood shade.

- No. 16,421. *Achlys triphylla* DC.
The stems, that is, the root-
stocks produce above-ground leaves
only at intervals of half a foot
or a foot. The new runners for next year's leaves
(cont. p. 28)

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Trees on Bull Creek Banks.

- *Acer macrophyllum* Pursh.
- *Alnus rubra* Bong.
- *Cornus nuttallii* Aud. 25 ft. h.

Cont. from bottom p. 27 -

are now being produced -
slender white runner-like root-
stocks, the internodes about 1 to
 $\frac{1}{4}$ in. long.

July 26, 1932

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Plants in Bull Creek - lower flat.

- *Aralia californica*.
- *Ribes glutinosum* var. *sanguineum*
- * - *Lotus americanus*.
- *Erechtites pennisetoides*.
- *Rubus parviflorus*.
- *Viola glabella*.
- *Orientalis europaea* var. *latifolia*.
- *Trillium ovatum*.
- * - *Epilobium paniculatum*.
- * - *Senecio vulgaris*.
- * - *Symphoricarpos albus*.
- *Umbellularia californica*.
- *Lithocarpus densiflorus*.
- *Cornus nuttallii*.
- *Faultheria shallon*.
- *Liarella unifoliata*.

* = on the better lighted borders, banks
of the South Fork.

Shade-Tolerant species.

- *Tiarella unifoliata*
- *Adenocaulon bicolor*
- *Smilacina sessilifolia*
- *Viola flabellata*
- *Oxalis oregana*
- *Achlys triphylla*

Dyerhill

- *Verbascum thapsus* L.
- *Marrubium vulgare*.
- About Carlotta + Hydesville, Umbria sibirica is called Indian Lettuce,
Achlys triphylla = Vanilla Leaf,
Trifolium tridentatum = Raspberry Clover.

Dyerhill

- *Photinia arbutifolia*
- *Populus trichocarpa*
- *Artemisia heterophylla*
- *Brassica campestris*
- *Raphanus sativus*

Large Redwood Trees

- Silent Bend: trunk ¹⁴² feet 2 inches at 4 1/2 feet.
- "Giant Tree" near Flat Iron Tree: 52 ft. 10 in. @ 5 ft. The sign of the California Automobile Association at the foot of the tree reads: "82 ft. circ.; 345 ft. high; approximately 2475 years old."

27 July 1932.

Burls

At the "Old-timers Cluster" I note two large trees:

1. Trunk with many large and small burls from 12 feet up to about 100 feet, all burls with limbs or small green ^{the} shoots.

2. Trunk next to no. 1, with large and small burls from the ground up to 150 feet, none of the burls shoot-bearing; no branches to that height.

3. Trunk, slender (1 3/4 ft.) with burl half-way up it, the burl rather larger than the trunk. Near Cowin Camp.

Age of Redwood.

1. Fallen trunk sawed through, in lower Bull Creek Flat, 749 years, not counting the sapwood which is largely rotted off.

2. Deer-Foot Vale, the first bend on n. side of creek above Lower Bull Creek Flat. 1011 rings, mainly sound, diam. 7 ft. 3 in.; height of section 13 ft.

3. Just beyond Combs Camp, ^{fallen} stump near road, 816 rings + estimate of 90 for decayed heart (center) + estimate of 20, ^{for} height of 10 feet = total 826. Diam. 4 ft. 7 in.

4. South of no. 3 possibly 60 or 80 ft., 586 rings + estimate of 20 for 16 feet height of section, total = 602. Diam. = 4 ft. 9 in.

5. Tree n. side of road, by road, near Bull Creek bridge. 1186 rings + 26 rings (obscure in center) + estimate of 30 for height of 24 feet = 1242 total. Diam. 7 ft. $5\frac{1}{2}$ in. 100 rings within the space of $2\frac{1}{4}$ inches! (Cont. p. 50).

No. 16,422 *Bromus vulgaris* (Hook.) Shear
(det. Beecher Crompton, 3/76)

This grass grew in the shade of the redwoods, but not the deepest shade.

No. 16,423. *Galium*

Colonies in the forest floor, depths of the Redwood forest. Mrs. Marton, the postmaster's wife at Dyerville, calls species of *Galium* one of the local by the name "Mattress Vine."

No. 16,424. *Erythraea umbellata* Gilib
Pink fls. Sand bar, Bull Creek.

No. 16,425. *Baccharis douglasii* DC.
Sandbar, Bull Creek.

The colony, a small one about 10 feet across, was wholly ♀.

No. 16,426. *Salix scouleriana* Barr.
Apparently all crown-sprouts 8 to 12 ft. h. Creek sand bar.

No. 16,427. *Hydrophyllum tenuipes*
Hel. var. *viride* Jepson. Deep shade
of redwoods, Bull Creek flat.*

No. 16,428. *Adenocaulon bicolor* Hook.

Deep redwoods. Stems arising from slender but fleshy roots. ^{Somewhat} the roots fleshy-fibrous.

No. 16,429. *Rhus diversiloba* P. & G.

Erect shrub, in redwoods, on sunny bank.

No. 16,430. *Rhus diversiloba* P. & G.

Climbing redwood trunks! Often go up 20 to 60 feet. The postmaster at Orenville, Norton, believes that in two cases, across the South Fork Bridge, ^{Redwood} two beavers were killed by Po's on Aug. It is incredible, since only the trunks

* There are no sign of fls. or old fl. stalks.

at the most, are shrouded, and that in most cases lightly, often only on one side.

Coming down from Bull Creek one day, walking, a motorist stopped and offered a ride. I got in; it was a small Ford with a truck body behind. The driver was a backwoodsman type. But soon told he belonged to the United States Biological Survey, a trapper of coyotes and "cats" in the back country. He told me his name, the number of years he had been here and so on. He asked me my name. I told him. He asked me what I did. I replied that I was a botanist. What is that? asked he. It was with some difficulty that I explained so that he caught a glimmer of what I stood for.

No. 16,431. *Coronopus didymus* (L.)

Smith. This alien crucifer grows in dry ground at Oyerville.

No. 16,432. *Oxalis oregana* Nutt.

Fls. very small, pink, one nearly white. Bull Creek flat.

No. 16,433. *Monardella villosa* Bth.

River bench flat at Oyerville.

No. 16,434. *Symphoricarpos albus* Blake.
with 16,433.

No. 16,435. *Cytisus monopetalus* T.

Thicket at Oyerville flat.

No. 16,436. *Datura tatula* L.

Oyerville, river bench flat.

No. 16,437. *Artemisia dracunculoides* L.

Colony. Oyerville, river bench flat.

No. 16,438. *Trisetum cernuum* Trin.

(det. Beecher Crampton, 3/26) This grass grows in the rather deep shade of the Redwoods.

No. 16,439. *Carex*

Cont. p. 57. with 16,438.

No. 16,440. *Juncus*

with 16,438.

No. 16,441. *Tiarrella unifoliata* Hook.

with 16,438

No. 16,442. *Iris*

With 16,438

No. 16,443. *Agrostis hallii* Vasey

(det. Beecher Crampton, 3/26)

This grass grows with 16,438.

Carlotta, Humboldt Co., 29 July, 1932

Went today with Professor and Mrs. E. Fritz to Carlotta to call upon Mr. and Mrs. Wilder. The Wilders have an attractive cottage with neat surroundings on a terrace lying above the Van Duzen River valley and backed by the Redwood forest. Mr. Wilder is a student of birds and ^{Harry} has a considerable amateur collection prepared for study, not for display. Mrs. Charlotte M. Wilder goes in for plants. She has a considerable collection of dried plants very well prepared and all, apparently, with collection data. This herbarium includes the plants collected while at Rinside as well as here in Humboldt Co. Mrs. Wilder is a little below average height, only slightly, - with well formed body and a quite large head, high forehead, large skull, regular features, fair

29 July, 1932.

complexion. Their home and garden has a delightful setting. A Rhannus ^{pursianus} cluster back of the barn is 30-40 ft. ^{R.} *Trillium sessile* is more gigantic than I ever saw it hitherto. Mrs. Wilder gives us the news of the accidental death, down a cliff, of Ralph Hoffman, on Santa Cruz Island, which occurred a few days ago. Mrs. Wilder has prepared a list of the native plants about Carlotta and Hydesville, the mimeograph copies much prized by many persons of the County interested in the native plants. Taking some apples from one of their fragrant-smelling apple trees, we went down to Scotia and had dinner with Wilbur Corbitt of the Pacific Lumber Co., at the large hotel of the company. After which we go down into the yards to see a Redwood trunk

section on a logging car which the P. L. Co. proposes to set up as an exhibit here at Scotia. The logs given us by Mr. Corbett was 1840 years I think or about that. It is not an especially large log but the annual rings are all very fine, ^{that is small.} The section is from a tree that suffered terrible abuse from fire in the woods and was not selected because making a handsome section, but only because it represented great age. After this we go to the home of a Mr. Harris, one of the old-time employees of the company. He has in the rear of his cottage a garden full of native lilies and has learned a lot about them. He is especially strong on *Lilium* species.

Before going to the wilders we had driven up Grizzly Creek to Grizzly

Flat, where Professor Fitch took a log section of a *Taxus brevifolia* tree which is 49 ft. h. and $9\frac{1}{2}$ diam. at 4 ft. I locate what is probably the largest Redwood tree on the flat. It is $10\frac{1}{2}$ feet in diameter! at 5 ft. I collect here:

No. 16, 444. *Clintonia andrewsiana* Torr.

Redwood shade.

No. 16, 445. *Actaea rubra* (Ait.) Willd.

ssp. *arguta* (Nutt.) Hult. Redwood shade.

No. 16, 446. *Achlys triphylla*

Redwood shade.

The root-stocks, slender, runner-like, only at intervals of a foot or more develop a bud for a leaf.

No. 16, 447. *Asarum*

deep shade

By spring, in

Not noted on p. 41-42, ante, re. Willis Corbitt, is this: He has a note book in which he makes a drawing of the essential parts of every new plant ^{he} finds. These drawings he ^{draws} so that the collection of colored drawings is now considerable, and I went through the whole of it with him with much interest.

I referred to the unequal valves of the pods of *Tiarella unifoliata* and Mr. Corbitt said "Sugar Scoop", an excellent simile, for it is quite like the old-fashioned sugar scoop used in ^{old-time} grocery stores.

- "No. 16, 448. *Acer macrophyllum* Pursh.
near "Big Tree"
"No. 16, 449. *Smilacina* ^{*racemosa* var.} *amplexicaulis*
Nutt.

- "No. 16, 450. *Deschampsia elongata* (Hook.) Munro ex Benth.
(det. Beecher Crampton, 3/76)

This grass grows in the Redwood forest, in spots a little lighter than the intense depths.

- "No. 16, 451. *Agrostis exarata* Trin.
(det. Beecher Crampton, 3/76)

This grass grows with 16, 450.

- "No. 16, 452. *Veronica americana* Schwein.

Moist spot, with 16, 450

- "No. 16, 453. *Woodwardia* ^{*fimbriata* J. Sm.} ~~*indica*~~

This fern grew on the bluff of Bull Creek, north bank.

- "No. 16, 454. *Galium*

Bank, Bull Creek.

- "No. 16, 455. *Lathyrus pauciflorus* Ker.

Bank of Bull Creek on a little flat that is a semi-open. Pods very slender. Rootstock slender, deep-seated.

- No. 16,456. *Lathyrus torreyi* Gray.
 Rootstocks now producing branched runners freely, these runners fleshy, with the advancing runners curved into the form of slender tip of the a hook!!! The runners are slender, but, as I say, fleshy. The pods dehiscence their seed, then are cut off near top of pedicel and fall. If the pods do not dehiscence because the seeds do not mature or are sterile, then the pods also fall but fall with the pedicel which is cut off at the base in this case!

No. 16,457. *Sanicula menziesii* H. & A.
 with 16,456.

No. 16,458. *Melica geyeri* Munro in Boland.
 (det. Beecher Crumpton, 3/26)
 This grass grows with no. 16,456

- No. 16,459. *Polygala californica* Nutt.
 with 16,456.
 No. 16,460. *Achillea borealis californica*
 Open bank of Bull Creek.
 No. 16,461. *Chenopodium botrys* L.
 Open bank of Bull Creek.
 No. 16,462. *Rosa gymnocarpa* Nutt.
 Hillside forest.
 No. 16,463. *Asarum canadense* Lindl.
 Redwood shade.

No. 16,464. *Lathyrus latifolius* L.
 Apparently spontaneous in various localities of the lower Eel River. There ^{spurs} came from near Scotia, 29 July 1932.

— *Vitis californica* Bth. Near Cummings farming little "vineyards" on the naked flats of the creek bottoms, the vine spreading over an area of 8 to 15 feet. Cut from p. 17 at top. That is these plants are "on the ground", not climbing as one usually sees them.

No. 16,465. *Baccharis douglasii* DC.
Colony all ♂

No. 16,466. *Salix scouleriana* Barr.
Dry hillside.

No. 16,467. *Nothofagus lomatus* Nash.

Velvet Grass. This grass is very
↑ see p. 56.
common, the most common one,
on cut-over lands, dry hillside.

No. 16,468. *Galium* ~~shallon~~ *shallon* Ph.
Hillside. Dry cut-over lands

No. 16,469. *Rhus diversiloba* Pog.
Leaves all from one branch;
leaflets 5, 6, or 7, as well as 3.

Dry cut-over lands, hillside.

No. 16,470. *Gaultheria shallon* Ph.
Deep woods at "Tian

Tree".

No. 16,471. *Vancouveria*

with 16,470.

Logged hillside near "store" on Bull
Creek.

- *Epilobium paniculatum*

- " *angustifolium* L.

- *Achillea millefolium*

- *Clintonia andrewsiana* Torr.

- *Hieracium albidiflorum*

- *Corylus rostrata*

- *Rubus parviflorus*

- *Lathyrus*, same as no. 16,455.

- *Rhus diversiloba*

- *Smilacina amplexicaule*

- *Ceanothus parryi* Trell.

- *Erechtites prenanthoides*

- *Gaultheria shallon*

- *Anaphalis margaritacea*
Common.

- *Vaccinium oxatrum*

- *Sambucus glauca*

- *Rubus leucodermis*

- *Trientalis europaea* var. *latifolia*.

Tree Ages: Redwood
(cont. from p. 34.)

6. Lower Bull Creek Flat: section at 14 ft. above base: 971 rings; 7 ft. 6 in. diameter.

7. Tree on south side of road where Bull Creek is close ^(40 yds.) to road; 1046 rings + estimate of 70 for ^{radius} 4 1/2 in. decayed heart + 20 for height of 18 feet = total 1136. Diam. 8 ft. 3 in.

8. Tree on n. side highway 1 1/2 mi. from Oyerwill (towards Red Crest) the section facing the highway, rather cracked by weather and highway dust, but sound 840 rings + estimate of 15 for height of 14 feet = total 855. Largest diam. 10 ft., other diam. nearly equal but lower side buried in soil. (60 ft.)

9. Near no. 8 but a little back of

pavement, 936 rings (essentially sound from margin to center on line of count) + 20 for height of 16 feet = Total 956. Diam. = 8 ft. 1 in.

No. 10. Trunk by pavement at foot of hill country west of Red Crest 2 mi. 756 rings, remarkably sound
First 50 years = 1 foot radius
Next " " = 10 inches
Last 100 " = 2 3/4 "

Diameter 8 ft. 9 inches.

11. Scotia. Yard of Pacific Lumber Co. 1938 rings. Last 1200 years, centuries average 2 1/2 to 4 inches. First 400 years, the total is 1 ft. 10 in. The growth is remarkably uniform, the width of rings uniformly narrow in the center, gradually becoming more narrow outwards, the last 1200 years having minute rings with some interrupting

bands a little broader, but the rings not extreme in change of size but only moderately so. Ellis Corbett made the age of this 1840 years; another Pacific Lumber Co. man made it 1820. The latter counts were on the base of the butt cut, while mine was made on the top, the log resting on the flat ear on the basal section. This section is about 10 ft. long. Another log, the second log, lies on its side on the same flat ear.

12. Perrott Creek, n. of Oyerville, tie-cutter's road. Rings 787 (W.L.J.), 841 (E. Fritz). Fritz got more sapwood on his radius than did I. Diam. 5.5 feet, the section at 14 ft. above base. When the tree was 154 years old + 14 feet growth height, there was a fire

13. Great hollow stump on Weatt Hill. About 600 years (at 25 ft.) acc. E. Fritz. This hollow log, closed at the top, rested on a stump which is a mere shell. 12 feet in diam. It is procligious; the basal part doubtless having expanded to provide buttresses for the weight of the tree. The diam. where count was made = 72 inches.

No. 16,472. *Melissa officinalis* L.

upper pair stamens shorter.

Cor. white; upper lip a little galeate, shortly lobed above the galeate portion. Style glab. Palate of lower ^{lip} with a few short erect hairs.

Cor. tube curved outward, upper calyx-lip broad (in a way truncatish) shortly ⁽³⁻⁾ toothed; lower lip longer, its lobes lance-acuminate. Cor.-tube hairy within. Leaves on

upper side with scattered short hairs (trispiculose!). The ring of ^{in corolla} hairs is extraordinarily oblique, short spreading hairs, not very dense.

lower lip



upper lip with short hairs on palate.

Corolla laid open.

No. 16,473. *Dryopteris arguta* (Kaulf.) Watt
(Det. Tryon, 1938)

This fern is rare in Bull Creek Flat. I saw only the one cluster in Deer-foot Vale.

No. 16,474. *Carex*

The conspicuous tufts of leaves of this species are not rare in Bull Creek Flat in several places. This spm. taken in Deer-foot Flat. The leaf is furrowed in a peculiar way:



that is, there are 2 channels below or furrows, one furrow above.

No. 16,475. *Micromeria chamissonis* Greene. Leaves $1\frac{1}{2}$ in. long; stems 5 or 6 ft. long, prob. longer, trailing.
= *Satureia douglasii* (Bth.) Griseb.

no. 16,476. *Rumex obtusifolius* L.
Oyerville.

antholurus lonatus.

- Cont. from p. 48. Lower glume narrower than the upper which has a strong nerve on the middle of each side. Both glumes carinate, the upper very strongly so. Florets 2; lemma of the lower carinate, not nerved, awnless; lemma of upper floret narrower, with an awn a little over half as long borne in the chft apex. Awn merely bent in these spms, not hooked as said in Manual. Lemmas not ciliate as said in Manual, but the one of the lower floret narrowly membranous-margined. Glumes ^{minutely} puberulent (not "villous"), hispidulose on nerves.

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- Carex

Cont. no. 16,439.

Perigynium triangular, hispidulose on upper half, distinctly but minutely 4-nerved on face, obscurely 3-nerved on the sides of the convex back. ^{two}

no. 16,477. *Dioporum smithii* (Hook.) Piper

Bull Creek, 27 July

- *Hypnium perforatum* L., on Mail Ridge. Great colonies filling the fields. In one place Professor Britz calls my attention to a fence-line, the colonies dense on one side of it, none on the other or west side. He explains this difference as due to close grazing, the plant being edible by cattle when young.

Marah oregonus (T. & G.) Howell

no. 16,478. *Echinocystis oregana* Cogn.
2 mi. W. from Oyerville. 3 Aug.

- No. 16, 479. *Arctostaphylos glandulosa*
Eastw.
No. 16, 480. *Rhamnus californica*
Esch. dry chaparral slope.
No. 16, 481. *Stachys ayngoides* Bth.
dry chaparral slope.
No. 16, 482. *Lagophylla ~~remissima~~*
nutt. dry grassy hillslope.
No. 16, 483. *Monardella villosa* Bth.
ssp. neglecta (Greene) Epl.
dry grassy hillslope.
No. 16, 484. *Eriogonum nudum* var.
oblongifolia dry grassy hillslope.
No. 16, 485. *~~Satureia douglasii~~*
~~Micromera Cham-~~
~~issonii~~ Greene. shade of
Quercus chrysolepis
No. 16, 486. *Birsinia ~~Hamizonia purpurea~~*
Rocky slope. #16, 4864 ↑
No. 16, 487. *Eschscholtzia*
dry grassy slope.
No. 16, 488. *Carum kelloggii* Gray.
Bracken-grassy slope,

- dry now, but wet in spring.
No. 16, 489. *Disporum hookeri* Britt.
Berry yellowish
or orange. Chaney ranch, at
the cold spring. Canoe Creek basin.
No. 16, 490. *~~Clarkia purpurea~~ ssp.*
~~foetida~~ quadrinervis
Below Chaney ranch. Dry grassy slope.

Chaparral Area on w. slope Grasshopper
Peak, betw. Bull Creek & Canoe Creek.

- *Arctostaphylos glandulosa* Eastw.
Crown sprouts arising from basal
Rocks 2 feet 1 inch wide!! The
chaparral is dominated by this sp.,
it is, indeed, almost pure.
- *Rhamnus californica* Esch.
- *Ceanothus parryi* Trel., but a
single stunted individual noted.
- *Quercus chrysolepis*, dwarfed
- *Ceanothus incanus*, dwarfed.
- *Garrya fremontii*, chopped

down to a rough low mat, by deer probably.

- *Ribes roezlii* var.
- *Echinocystis*
- *Achillea millefolium*
- *Umbellularia californica*,
very low, almost mat-like,
because burned down in the
general fire probably
- *Eriodictyon californicum* Greene.

Grasshopper Peak, East Slope,
which is open woodland.

- *Pseudotsuga taxifolia* Britt.
- *Arctostaphylos glandulosa* Eastw.
- *Ribes roezlii* var.
- *Quercus chrysolepis*
- Also note the app. coll.; see p. 58

- Cont. from bottom p. 195. Or, I
may have in memory that Chandler
collected *Mentzelia laevis* at #. P.
Princeton which is south of
Stony Creek on the Sacramento
River.

- No. 16, 491. *Beaumontia parryi* Zucc.
Wright
- No. 16, 492. *Beaumontia thyrsiflora*
Esch. Wright.
- No. 16, 493. *Erigeron inornatus* Gray.
var. *biocleri* (Greene) ^{Japan}
_{Rocky ledge, ↑ in river.} This var. *viscidulus*
Gray, Tracy thinks distinct. Garberville.
- No. 16, 494. *Populus trichocarpa* T. & G.
Garberville.
- No. 16, 495. *Trichostema lanceolatum*
Bth. Cedar Creek. Dry hills
Mendocino Co.
- No. 16, 496. *Arctostaphylos columbiana*
Piper. Little Red Mt. on Cedar Creek, Mendocino Co.
- No. 16, 497. *Henizonia clelandii*
Greene. Cedar Creek, Mendocino Co.
- No. 16, 498. *Calycadenia truncata* DC.
^{ssp. *truncata*}
Little Dry grassy hills, lower
slopes, Red Mt.
- No. 16, 499. *Ericameria arborescens*
Greene. Cedar Creek, Lower slopes, Red Mt.
Little

see itinerary pp. 68-69.

No. 16,500. *Eriogonum vimum*

Little Red Mt., middle slope.

No. 16,501. *Arctostaphylos* ^{*mariposa*}
viscida Parry. Little Red Mt. summitNo. 16,502. *Erigeron* ^{*inornatus* Gray}
var. angustatus Gray
Little Red Mt.summit, dry rocky places
amongst pines.No. 16,503. *Potentilla*

dry rocky places

amongst pines.

No. 16,504. *Erigeron inornatus* Gray var.
angustatus Gray dry rocky places
amongst pinesNo. 16,505. *Leamothus prostratus* ^{Bth.} var.*parvifolius* Jepson. Usually quite
^{var. *profugus* Jepson.}
prostrate and always small-
leaved. Circular mats 3 to 7 ft. wide.No. 16,506. *Holodiscus* ~~*discolor*~~ ^{*var. glabrescens*}
~~*microphyllus* Rydb.~~ ^{Jepson.} dry rocky slope.

on summit. Only one bush noticed.

No. 16,507. *Elymus glaucus* Buckl.
(det. Beecher-Crampton, 3/76)This grass is common
on the dry rocky summit, common
relatively, in view of the scanty
herbaceous vegetation.No. 16,508. *Hemizonia clevelandii* ^{Greene}
"Bald" slopenear summit. This is the dom-
inant on the higher slopes
on "Balds" or "opens." See p. 69.No. 16,509. *Eriogonum nudum* var.
oblongifolium "Open" on higher
slopes of Red Mt., below summit.
LittleNo. 16,510. *Calycaedia ciliata* ^{Greene}
with 16,509.- For two more numbers collected
on Little Red Mt., see nos. 16,526-7.

No. 16,511. *Eriogonum nudum* var.
oblongifolium Near Cookridge
Camp, Leggett Valley.

No. 16,512. *Eriogonum*
with 16,511

No. 16,513. *Cirsium* ~~brevifolium~~ Jepson.
See p. 67. Red Mt., low
on side

slopes / towards Blue Rock Ridge.

No. 16,514. *Viola cuneata* Wats.

Rocky places among
pines, summits.

No. 16,515. *Linum micranthum*
open island
dry rocky summit under pines Cor. yellow! 502 ft. 67.

No. 16,516. *Iris*

The most common
herb on the summit, forming
little colonies, the tufts of leaves
often sedge-like. dry rocky soil.

No. 16,517. *Pedicularis densiflora*
Bth. The most common ^{herb species} after

Iris no. 16,516 on the

summit, dry broken rocky soil.

No. 16,518. *Oxycoccus vacciniifolia*
Kell. Engelm. Common on the
summit; low, 1 to 2 feet high
mostly; crown sprouting freely,
forming circular patches 2 to
6 feet wide. Note the curious galls.

No. 16,519. *Rhamnus californica*
Low, 1 to 2 ft. h.

on summit; little of it; ^{also} on lower
slopes amongst *Pinus attenuata*.

No. 16,520. *Potentilla*

dry rocky places

on summit; fairly frequent.

No. 16,521. *Whipplea modesta*

Low. Dry rocky places, occasi-
onal.

No. 16,522. *Rhamnus californica*
Eschscholz. With *Pinus attenuata*.

No. 16,523. *Arctostaphylos*
glandulosa Eastw. Near the *Pinus*
↑ but below

attenuata grove. Rounded bush 5
ft. high, resting on ground.
Petioles not glabrous, but not viscid* (cont.)

No. 16,524. *Pinus attenuata* Less.

A large "grove" of it
on east lower slope Red Mt.;
in areas the plants standing
very thickly*, especially as poles
5 to 9 ft. high and extremely
slender, perhaps half of it dead
by the last fire. See cones.

- For other nos. collected on Red
Mt. see p. 94.

** much like a corn field.

* or glandular enough for A.

"viscida, or scarcely. The bush
looked a bit different from the
ordinary A. viscida Parry. It is on a
little side backbone or spur running out
from the main backbone connecting Red Mt.
with the Eagle Rock mass.

No. 16,525. ^{= A. fascicularis Dcne.} *Asclepias mexicana*

Bar.

Bell Springs Ridge.
= Nail Ridge!

- Cont. from no. 16,513. This grows on
the dry slope in open pine country
- not in a swampy place as is
usual to it.

Cont. from p. 63. Little Red Mt., 6 Aug. 1932.

No. 16,526. *Cuscuta californica* Choisy
on *Hemizonia cleve-*
landi Greene. In "open" on Red Mt.
about half-way up. ^{Little}

No. 16,527. *Hieracium bolanderi* Gray
Red Mt. on the

broken red rock summit. (VC)
Fragment which was added to Tracy 10319A

Cont. from p. 64. *Linum cleve-*
landii Greene
var. *petrophilum* Jepson. No. 16,115.

— on the morning of August 6, Jos. P. Tracy of Eureka calls for me at Orville and we drive up the South Fork Eel River. By dint of inquiry in the Leggett Valley region we get directions for reaching Red Mt. trail. ^{Tracy Red Mt. proves to be Little Red Mt.} We leave the car at Island ^{Tracy (cf. p. 96).} road camp and begin the very arduous like or rather climb up the ridge which leads in to ^{Little Red Mt. (see p. 71).} Red Mt. ^{Covered p. 96.} As we get on the hog's back, we find ourselves under fine groves of *Parsonsia densiflora* and *Arbutus menziesii*, finer than I have recently known, reminding me strongly of the woodland delights* along the ridges in early-day California before the ^{wooded} country was wrecked. Thus we climb over the "knolls" on the backbone, one might say vertebrae, and go on up and up, fighting ^{through} occasional colonies.

* Plants collected see pp. 62-3.

of chaparral, coming out into "open" covered mainly with *Hemizonia clelandii* ^{no. 16,508} (with grass at higher altitudes) which grows up as timbers with its gummy stickiness, as does *H. lugubraefolia*. I must say that it looks very different from *H. lugubraefolia*; and Mr. Tracy insists that the former cannot be a variety of *H. congesta*, nor the same as *H. congesta*. Then we make a final stiff hard climb from an "open" to get onto the summit where grow *Pinus lambertiana*, *Pinus ponderosa*, *Libocedrus decurrens* with a low understory of chaparral, mainly *Arctostaphylos visida* Parry! The herbaceous vegetation is almost completely dried up, nor can one conceive that on such a rocky substratum many things (p. 71)

A thoroughly charred
and blackened Redwood
tree stands in Bell
Creek by the road,
s. side. It has a
narrow line of bark
down one side and
a "green tree" sprouting
from it at the top.
A Tan Oak bush
grows in the
notch of the
main trunk.

Tan
Oak } →

40 ft.

55 ft.

65
ft.

Diam. at base = 11 ft.

(cont. from bottom p. 69)

could grow, especially in the kind
of soil which results from the
weathering down of these red
rocks.

The following were noted along
the lower backbone ** coming up:

Rhododendron occidentale

Photinia arbutifolia

Arctostaphylos uva-ursi Parry.

On the summit I noted:

Camothus foliosus Parry.

Arctostaphylos viscidula abundant *

Whipplea modesta Torr. scanty

Eriodictyon californicum Greene

Also note the list of nos. on p.

62-63 ante.

† collection

* well-rounded ^{erect} shrubs 10-15
ft. diam. at ground, 7-14 ft. high

** See also p. 83.

As we looked out from the summit of the mountain that we are exploring, a great red mountain much more massive and extensive rises before us northward across the gorge of a deep stream. It is obvious that the mountain across the gorge is really Red Mt., the original Red Mt. After going over the top ^{of Little Red Mt.} pretty thoroughly we go back to Leggett Valley by the trail over which we came. There we meet an old-timer with whiskers, who lives on the Hollow Tree Road, and he tells us that the mountain we have been on is Little Red Mt. Persons at the highway camp take up to Little Red Mt., and so it is well known in this neighborhood. Here it was not far from the highway, which has brought a little

string of habitations along Little Red Mt. would have remained obscure and un-named probably.

We stop the night in Leggett Valley, ^(see p. 88) go next morning to Cummings, interview an old settler named Brown, climb the Blue Rock granite and stop at the Paul Grothe ranch for information. Mr. Grothe is out for cattle, but Mrs. Grothe helps us and indicates at what gate to leave the Blue Rock ridge road. Their ranch is the Blue Rock Ranch, and that fine mass of rock rises as a landmark on the west side of the road. The mileage is as follows:

Cummings sta.,	121.5 miles.
Blue Rock Ranch,	127.3 "
One Sin gate,	129.2 ", where
we enter the Red Mt. territory.	
Eagle Rock,	132.5 mi.

The road is good enough for a ranch road in the mountains, but it is only a trail in some ways, and we slip, as if purposely down to the bottom of a great deep basin that lies between Blue Rock Ridge and Red Mt. In reality we are following a low backbone which connects the two, with the great hollow to our right. It is a long drive past the rugged upland of the Eagle Rock territory before we reach the base proper of Red Mt. At the foot of the mt. we take the left hand road, wrongly, ending up in a half-mile or so at the cabin of a lone settler, one Huey, who looks very aged and forlorn. We return to the double gates (we should have gone through but one) and soon begin, by the right-hand

road, to climb up Red Mt. We soon enter, on the slope, a territory of *Pinus attenuata* (see p. 66) ante. There are several trees ^{of size} that escaped the last fire. One measured 3 ft. circ. at 4 feet, and was 60 ft. h. The small trees made a thick stand like stalks in a corn field. One individual bore a cone when it was eight years old. These small individuals 3 to 8 feet high are mostly unbranched. We climb to the summit of the mountain and wander over a good deal of it. The road goes directly over the top and down the north side, ending at the Emma Huey ranch. The summit has a thin but extensive forest of *Pinus Lambertiana* Dougl., *Pinus ponderosa* Dougl. and *Libocedrus decurrens*. There

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is a great deal of *Quercus*
vaccinifolia, low, widely spreading,
a very great deal of *Aristotaphylos*
visida which seems extrane-
ly like the natural type in
the Sierra Nevada, and a good
deal of *Ceanothus prostratus*,
small-leaved as on Little Red Mt.

The forest crown, of the species
noted above, is 40 to 70 feet
high. There is frequent *Eriodia*
tyon californicum, but stunted,
not forming marked colonies
of its usual size. *Whipplea*
modesta Torr. is not infrequent.

walking over the western more
precipitous edge of the mountain
Mr. Tracy stumbles on to *Garrya*
*buxifolia** on a rocky knoll, the
only spot on the mountain
where it was noticed - perhaps
2 dozen plants, low, bushy, some-

* See no. 16, 544.

7 Aug., 1932

(For plants collected see pp. 64-66).

77

what flat-topped, 8 to 16 inches high
and 3 to 4 1/2 feet wide - a
sort of dwarf shrub. *Quercus*
vaccinifolia is mostly 1 to 1 1/2
feet high, 2 to 6 feet wide. Hubs
are extremely scarce but evidently
there were more in ^{the spring} season. Mr.
Tracy picks up *Hisacium greenii*.
Xerophyllum tenax is frequent.
We taste our fill of this strange
mountain and go down the way
we came up, stopping to examine
the curious *Pinus attenuata* col-
ony on the lower east slope of
the mountain proper. Was this
^{(on the road to Tracy's} *Pinus jeffreyi* (see p. 94),
area) we noted a very showy
white-robed thistle, *Cirsium*
breweri (Gray) Jepson, ^{no. 16, 513.} We now take
the return on the backbone, but
soon stop to look at a short lat-
eral ridge. *Quercus wislizenii*,
about 6 to 12 feet high, is there,

extremely densely foliaged, especially on the lower part of the bushes to the height that they crop. The upper part has also been browsed by cattle. *Quercus Kelloggii* (Californica) is also here, but was not seen on the mountain. This road or trail is a "one-way road". In most cases [↑]there would be no room to pass if meeting another vehicle.

On coming in we met John Grothe driving cattle, with his son. We talked with him for some time, especially about the possibility of any marsh or swamp areas on the mountain. Being a cattleman Grothe would certainly know of such, but he gave us no information that would encourage the supposition of marshes. If such exist

they must be well down the north or west sides. From "whiskers" in Leggett Valley, from Brown near Cummings, and from Grothe we got some clues as to the old government trail which went over the top of Red Mt. and out to the coast, eastward joining with the trail from Laytonville which went along Blue Rock ridge north to Eureka, and perhaps there was a trail easterly to Round Valley. These government trails were opened up in the days when the government was gathering up the Indians, say in the late 50's and early 60's. Often I wondered how ^{H. N.} Bolander got into the rough country of Red Mt. in the year 1866. It was by the one trail through the region! a government trail.

Blue Rock = 3200 ft. est. by Tracy.

We climb back to the Ore Bin gate.
The mileage is now 143.3 miles.
Compare bottom p. 73. We
turn north, follow the Blue Rock
Ridge to the narrow saddle where
it joins the Bells Springs ridge,
follow it to the end where it
slips down on to the narrow saddle
connecting with the next ridge,
Chamney Mt. (Harris) or Port Forward
Ranch ridge.

The mileage at Bells Springs is 148.4 mi.
On the Bells Springs ridge is *Adiantum fasciculatum*. { Bells Spgs. ridge:
5740 ft. on Prager's
sketch map.

I am struck once more by
the fine trees of *Quercus kelloggii*
along these three ridges; the
fine *Arbutus menziesii*; the
interesting colonies of *Quercus*
garryana. In little swales,
cups, high hollows, are small
colonies of *Quercus garryana*—

the colonies young, the height 8 to
14 feet, the stems straight and
erect and standing 1, 2, or 3 to
a square foot or a square yard.
Mr. Tracy remarks that on
Howell Mt. this oak was once
called "China Oak". Why, asked?
Because they stand so thickly
replied Mr. Tracy.

On the Bells Springs ridge we
passed a great rock right on
the ridge summit which was
adorned with scattered but very
fine clumps of *Pentstemon* *coronatus*
in full flower. It is a
brave spectacle.

The mileage* on Chamney Mt. is 151.4
We take it again " " " as 152.3
We note *Adiantum fasciculatum*
on Chamney Mt. it is a minor
species. The brush is mainly com-
posed of other things. We note
* compare bottom p. 73.

Cercocarpus betulaeifolius. Also
Quercus wislizenii scrub.

We run down grade off
Channelz Mt., down, down,
down, on east slope, down, as
if one would never stop, and
end at Harris, where ^{we} begin
to climb. Harris road sta. is
opposite Jewett Rock, a very
prominent landmark rising
out of the cañon of the main
Eel River. We run along sum-
mit of ridge, after the climb
from Harris, and finally reach
the gate marked as the turn-off
for Garberville. We run down
the west slope to Garberville,
where we have dinner at
nine o'clock, and then return
to Dyerville, Mr. Barry going
on to Eureka.

This road, the Blue Rock - Bulls Shro.,
- Harris road, is much as it
used to be. It is not spoiled by
civilization and man to any
such degree as in other places.
As we look ahead along the
ridges, Mr. Barry says, pick
out with your eyes the highest
point ahead, you may know the
road goes over it. This experience
is repeated.

Adenostoma fasciculatum was
noted near Cummings.

Ceanothus foliosus in Leggett Valley.
See p. 68 ante.

Ceanothus incanus at Dan Creek,
near Leggett Valley.

Cornus nuttallii.

Berberis nervosa, on "backbone" leading
up to Red Mt., see p. 68 ante;
also p. 7.

Dyer ville, Aug. 8, 1932, c. 290 ft.
Humboldt Co.

Fire Damage to Redwood

The damage done to Redwood by fire is very great. In Bull Creek, about 2½ mi. from mouth, by road, is a very large tree, say 7 or 8 feet through. One looks a second time and you see it is a mere shell, completely hollow, running up 60 or 20 feet.

An enormous number of trees have been injured at the base or on the side of the trunk, making a hollow of various depth on one or more sides. Sometimes considerable trees *24, feet high are killed by fire, do not produce "fire-column", but produce sprouts only at the base. Usually, however, trees send out new shoots from the top down to the base making a narrow column of foliage called a "fire-column" (cont. p. 89.)

* One tree near "grocery" on Bull Creek, so killed, is 260 ft. h.

Dyer ville, cut-over lands, Aug. 8, 1932
c. 1000 ft.

No. 16,528. *Rubus* (~~virginicus~~) *vitifolius*
C. 15. In cut-over Redwood, Wroth.

No. 16,529.

This fern grew in great clumps by a spring. Wroth, hill above.

No. 16,530. *Diapymbrum altissimum*
L.

Noted one considerable colony of this crucifer in the cut-over Redwood. Wroth.

No. 16,531. *Crepis capillaris*

cut-over Redwood,

Perratt Creek.

No. 16,532. *Rubus leucodermis* Dougl.

Perratt Creek.

No. 16,533. *Erechtithes*

Discarded
Insect damaged
L.H.

Perratt Creek.

No. 16,534. *

This composite in little grass opens, cut-over Redwood, Perratt Creek.

* A sheet mis-numbered 15,534 of *Erechtites arguta* probably belongs here & was so placed. June 25 - L.H.

- *Ceanothus thyrsiflorus* Esch.

on the hill above Weatt the highest point is crowned densely with a mass of this species, the Redwood culls rising high out of it. In the Perrott Creek country on the north side of the river the entire Redwood area are everywhere dense jungles of *Ceanothus thyrsiflorus* 6 to 12 or 14 feet high!!

- *Erechtithis premantoides*, dense colonies in cut-over Redwood lands everywhere

- *Berberis nervosa*, Weathill.

- *Epilobium angustifolium*, great colonies in flower on the Weatt hill. 12 ft. h.

- *Madia*, the slender species, grows on these cut-over Redwood lands. The sticky sub-

age gathers up the floating down of *Cirsium arvense* and *C. lanceolatum*, particularly the former on Weatt Hill. There is so much of the "thistle down" that the landscape is quite changed!! The *Madias* look strange, as if a light snow had fallen on them. On the ground one finds the thistle-down in heavy wind-rows!

- A big Redwood (*Sequoia sempervirens*) stands alone in the logged lands of Weatt hill. Its trunk, especially at base, is amazingly large, but it is large above too. It has a circumference of 50.8 feet at 6 to 9 feet above the ground, the height at which taken varying on different sides of tree, owing to inequality of ground level. The loggers left it because lacking straight grain. (Cont. p. 95).

- No. 16,535. *Carex*
Semi-open in Redwood.
- No. 16,536. *Phacelia Bolanderi* Gray.
Stream bed.
- No. 16,537. *Anaphalis*
Ent- over Redwood.
- No. 16,538. *Epilobium paniculatum*
Nutt. Ent- over Redwood.
- No. 16,539. *Iris*
Ent- over Redwood.
- No. 16,540. *Clintonia andrewsiana* Torr.
Deerfoot glade. Redwood forest.
- No. 16,541. *Vancouveria*
Deerfoot glade Redwood forest.
- No. 16,542.
This fern grew on a
Bank in Deerfoot glade.
- No. 16,543. *Iris*
Redwood forest.

- Cont from p. 73. For an incident of
the night at this camp and a portrayal
of the wonderful character of Jos. May, of
my "Men and Manners", vol. 8, p. 36.

- Cont. from p. 84. The devastation
caused by fire in logging is fear-
ful. Trees left standing, down logs,
all suffer severely. The amount
of "waste" stuff left at the logged
area is appalling, large logs as
well as small branches, and all
sorts of abandoned milled stuff,
^{heavy} timbers and so on. Relatively
speaking Redwood is not injured
by fire as a pine forest is
injured, but the injury and
consequent waste^{nevertheless} is very great.

Madroño suffers severely from
fire, the trunks are commonly
burned at base on one side so
as to make "cat's eyes". The basal
growth tends to expand or widen
or buttress, so as to make support
for the crown, but if another fire
comes, the weakened tree is likely
to fall. Everywhere the Madroño

is in unfair status as against the
beligerent *Pseudotsuga taxifolia*
which grows rapidly, comes up
under cover of the Madronos and
soon overtakes it. So, surviving
Madronos, if any, pushed off to
one side, they are leaning or
curving. It is uncommon to see
an erect, symmetrical crown
Madronos with
with one-sided crowns
or wisps of crowns.

- In 1902 when I came through this region
with camp-wagon and horses, the Smith
Park Est. river was forded at Dyerille in
us took the ferry. I make no mention
of it in my Field Book, because so used,
in going about California, to fording
streams. The ferryman lived at Idolwild
and finished smoking his pipe, as he sat on
his porch, before responding to a "hail"
from the Dyerille shore.

Aug. 9, 1932

Working here in the Bull Creek
region I am put up at the "cabin"
which is the headquarters of the
Redwood State Park, at Dyerille.

The village consists of 3 cabins,
a postoffice, and a large garage
building. I had many courtesies
from E. P. French, Superintendent
of the Park. The postmaster is a
Mr. Norton who lives with his
wife and son Donald in one
of the 3 cabins.

- *Asplenium californicum* Miranda. It
is all through the region in "open"
of the Redwood belt.

- *Verbascum blattaria* L. Miranda.

Between Laytonville and Cummins road sta. is the largest assemblage of *Pectostaphylos* many-
 aint Parry that I know. For
 ten miles or more it is very
 abundant, associated with
Pseudotsuga taxifolia Britt. *Arbutus*
menziesii Pursh. It lies ^{and} below
 the Chancez belt above. in the hills

- *Vitis californica* Bth. Longvale.

- Knights Valley, Sonoma Co.

Ceanothus solstitialis

Verbascum thapsus L.

Quercus lobata Nees.

Asculus californica Spach.

Pseudotsuga taxifolia Britt.

Arbutus menziesii Pursh.

Dyer, after whom Dyerhill was
 named, had a sweetheart who
 turned him down. He came west to
 drown his sorrow and settled at
 the mouth of the Smith Fork, where
 Dyerhill. The sweetheart married,
 her husband finally died, she got
 into touch with Dyer again, and
 he wrote to her to come and they
 were married at Eureka. She
 outlived Dyer.

The store at Dyerhill ^{in early days} was
 a place of peckholes. It consisted
 of a saloon, a postoffice which
 could not be in a saloon ac-
 cording to law, a store and a
 shop, all partitioned off, but
 with holes, so that one man
 could see what was going on
 in all four places. Harness was much
 used in those days and the parts

Dyerille, Aug. 9, 1932.

hung on hooks from the ceiling; also cow bells. When there was an earthquake even the bells began to ring, everyone got outside!!

Red Mt. continued from

p. 66. Mendocino Co.

No. 16,544. *Garrya buxifolia* Gray.

See field note on p. 76.

c. 4500 ft.

Mail Ridge, continued from p. 21.

No. 16,545.

On *Quercus garryana*.

July 24. c. 3000 ft.

Red Mt., continued from p. 77.

No. 16,546. *Pinus ponderosa* var.

^{Grev. &}Jeffreyi Balf. A few trees on the lower part of Red Mt., off the mt. proper and near the backbone which runs to the Eagle Rock territory.

[Dyerille, Aug. 9, 1932.]

Cont. from p. 87. The diameter at base is $24\frac{2}{3}$ feet. The height, says Professor E. Fritz, who is with me, is over 250 feet.

- Oriskland and White Tharn. This country, so beautifully wooded in 1902 and 1903 when I was through it, is now all "wrecked" says Tos. P. Tracy, by fire, tan and other interests. *Ceanothus incanus* has come in, in vast colonies.

Mail Ridge.

There is much *Hypericum perforatum* - the fields often full of it. We come to one spot on the ridge where it fills the roadway, but scarcely goes into the open field of the slope on our right - the west slope of the ridge. Prof. Fritz attributes this difference to grazing, the

Dyersville, Aug. 9, 1932.

herbage being taken when young by cattle.

- Cont. from p. 68. We started up on a ridge that lies between two creeks, Dann Creek to east, and, west, Cedar Creek, tributaries of South Fork Elk River. Cedar Creek comes ^{down from} ^{, so to speak} northerly, and then from easterly, and heads near Blue Rock, its canyon lying therefore between Little Red Mt. and Red Mt. Little Dann Creek is the next creek (on the highway) towards Cummings after Dann Creek. The next one is grizzly Creek. The north tributaries of Rattlesnake Creek, in order towards Cummings, are: Howard, Mensler, Wilson, Porter creeks. The south tributary at Empire Camp is Elk Creek, at Tennoah Park is Mad Creek. The above from a sketch map by Tracy (J.P.), 1932.

Berkeley, Sept. 10, 1932.

- E. E. Moore, (Ph. D. of Columbia Univ.), now teaching in State Teacher's College at Memphis, Tenn., called today. He is interested in breeding Iris, Convolvulus and so on. He has a hard job teaching, it would seem: teaches 8:00 to 5:00 for four days per week. Has Friday and Saturday to himself. For western Tennessee, the Reel Lake area is being developed as a State Park and Biological station. Reel Lake was created in 1810 by an earthquake. Moore's "home town" is Ohio. He would like to make a red Iris!!

- Mentzelia gracilentia Fig. Dry Hills back of Antioch, Apr. 1869, Dr. A. Kellogg. - Cal. Acad. Sci. Herb., label in hand of H. Brandegee. (Circa 1898).

Mentzelia Lindleyi. fls. remain open longer (in Morrison Cañon, Niles) than indicated in fl. W. Mid. Cal. The leaves of *M. laevis* seem to me much more tenacious in their hold on clothing than in *M. Lindleyi*. This refers to Buena Vista (fl. W. Mid. Cal.). — L. M. Newlon.

The following sheets (U.C. Hb.) cited in no. circa 1920, cannot now be found:

- M. multiflora* Gray: Panamint Cañon, ^{Hall & Chandler 6824.}
M. rupestris T. & G. Saratoga, ^{Denny 245.}
M. involucrata Wats. Kane Spr., Ord Mt., ^{Hall & Chandler 6823; Barrett, Lemmon.}

Oct. 2, '32. Strawberry Cañon, Berkeley.

No. 16,547.

This form grew at head of Strawberry Cañon, just a little above Cherry Patch, in bottom of cañon.

No. 16,548.

From with 16,547.

— Thos. Bridges communicated to the London Zoological Society (Proc. 26: 1-3, — 1858) a paper, "Notes on Californian Birds". The collecting stations show that he was in Trinity Valley, ^{mt.} Shasta, Scott Mts. (Trinity Co.), ^{Trinity Mts.} Yosemite Valley, + Santa Cruz Mts.

In Proc. Zool. Soc. Lond. 25: 125-126 — 1857, is a "List of Birds collected by Mr. Thomas Bridges, Corresponding Member of the Society, in the Valley of San José, in the State of California. By Philip Lutley Sclater, M.A., F.E.S.

— Invasion of temperatures in Yosemite reg. In 1911 I noticed that flowers in bloom were more abundant on Mt. Lyell in July than at the base ^{the summit of} on middle north slopes. Mrs. Helen Sharsmith, Bot. 226, says that on Mt. Dana summit there was an array of perennial herbs and annuals in flower — you could

not walk without stepping on them. This was in July. On the sides, going up, there was nothing. The warmest part of Mt. Tamalpais is the summit! above the fogs of summer - the fog belt. Mr. H. H. Mason says that rain-fall at Colfax is much higher than at higher altitudes above Colfax on the Sierra slope. The coldest part of Hetch-Hetchy is the valley floor - the cold currents flow there - up on the walls it is much warmer. So a camp on the floor is the coldest place. This is spoken of as before flooding. - Nov. 9, 1932. Some *Pinus monophylla* is found in a cool corner in lower Yosemite Valley.

- *Arctostaphylos semitina* Jepson. It flowers more or less continuously - it may be found in flower in every month of the year. It fruits rather

sparingly.

- *Bomassia fimbriata* var. *californica*

Is now in flower at Bootjack

Camp on Mt. Tamalpais. - Nov. 13, 1932, acc. W. T. Frost, one of my students.

- Susanah Bixby Bryant. This note refers to the records of her in vol. 45, p. 119 at seq. She had visited me in Berkeley, I think several times in 1926, though it appears that I made no record of her visits or the index fails to get them. At this time, Apr. 21, 1927, ^{John} Thos. Howell ^{myself} was in her employ. And I had arranged that employment. My correspondence (vol. 20, pp. 106-115) shows that Sept-Dec., 1926 I was in correspondence with her. Perhaps no records were made of her visits to me - but I feel sure that she made at least two ^(say Dec. 1926 - Feb. 1927) before, at her urgent desire, I went to see the Botanic ^{↑ Apr. 1927,}

garden at Rancho Santa Ana (see vol. 45, p. 119, ante). The call which she made upon me, reported in greatest detail (vol. 46, p. 140a, ante), was in October, 1927. She comes to Berkeley to see me this November, 1932, and I meet her at the house of Mr. and Mrs. Duncan McDuffie, Roble Road. This meeting is set down in "Men & Manners", * vol. 6, p. 27. See p. 119 seq. also.

- Rino Bacigalupi, Ph. D. Harvard, grad. Stanford Univ. calls today ^{(c. Nov. 24, 1932).} He sees a sheet of *Garrya* on my desk, and is led to say that he worked on *Garrya* as a subject for his masters thesis at Stanford. Being unable to distinguish *G. pallida* Eastw. from *G. fremontii* Torr., he finally applied to this Eastw. in person. She talked about it, and

* Private journal of W. L. Jepson.

he inquired further, and she talked on and on. The more she talked the less clear he became about the matter, about what she was saying. Finally he tried desperately to pin her down to something definite. Then, at this stage, this Eastw. became a bit exasperated and burst out, in reply to his persistence: "Well, any fool can tell them apart in the field."*

A. E. Wieslander, U. S. Forest Service, was present during this interview. He had been talking about various forms of *Arctostaphylos* met with in his field work in mapping woody areas in California. He was insistent that there are more species in the field than provided for in the book, the Manual, and that he could always recognize them in the field, always spot each without

* see p. 105.

confusion - but that once they were brought home as herbarium specimens much confusion developed. At this point Bacigalupi told his story.

Wieslander says *Arctostaphylos nevadensis* becomes erect in Del Norte Co., always where "it is forced to".

Going back to top of page 103: I suspect there is something to *G. rigida* Eastw. The leaves of *G. elliptica* are thinnish, very green and closely undulate. The leaves of *G. rigida* are leathery, yellowish and with broader undulations. It is represented by Newlin 72 (Mt. Tamalpais) and

Hoods Peak, U.S. Baker, (acc. C.V. Morton)
 No. 16,549. *Malva borealis* ^{M. nicaeensis, Ait.} Wallum. Berkeley,
 Nov. 15, 1932.
 No. 16,550. *Malva parviflora* L. " " "

* from bottom p. 103.

Wangerin, who monographed *Garrya* for Engler's *Pflanzenreich*, has some uncomplimentary things to say of Miss Eastwood - in German!

- The Council of the California Botanical Society met for dinner at Drake's restaurant, Berkeley, on Dec. 15, 1932. I was invited to join them. The talk got around to C.F. Millspaugh and his *Flora of Santa Catalina Island*. I pointed out that he came to California because of illness and to recuperate. His stay on Santa Catalina was very brief - say two months. Then H.E. McMinin, Mills College spoke up and said: Well it is worth about that much.

↑ (the flora)

- Come to call the son of M.S. Babf. It gave him pleasure to see the portrait of his father in my
 & framed

private laboratory. He himself is interested in birds. His father's library and herbarium went to the Field Museum. B. F. Millsapough, the Curator in Botany, stipulated that Babbs' letters should come with the herbarium and library. - Jan. 12, 1933.

- Climate. - Up to the end of Oct. 1932, there was no rain since July 1.* There was a little rain in December but not sufficient to be of economic importance as to vegetation. The winter has been exceptionally cold and dry. The week from Dec. 5 (Monday) to Dec. 11 (Sunday), I was in the Sacramento Valley (Yuba Valley). The weather each day grew progressively colder. The cold reached its peak on Sunday (Dec. 11).** On that day Jos. LaConte recorded 15° above zero in Berkeley. Eucalyptus

* Cont. p. 108. + ** See vol. 54, p. 90

groves were badly hurt. Since, the trees have been wintering. Now they are losing their leaves, they look very sick with dead branches sticking out from the main crown. The first effect is very spotted. Some Eucalyptus trees are scarcely hurt at all, or only partly, and stand alongside badly injured trees. Any number of exotics in gardens have been killed and some hitherto thought hardy in our climate. During my work in Yuba Valley, the wind blew from the North with fearful cold. Water froze in pails in the middle of the day. Here in Berkeley there were days when, outside the house, the air felt as it does in mid-winter in New York state. There has been much "North Wind" all winter. On Sunday night, Jan. 8,

a high gale in Berkeley ripped apart loose structures. An oak (*Quercus agrifolia*) in Faculty Glade was overthrown; the LaCorte Oak lost nearly $\frac{1}{4}$ its remaining crown. — Jan. 14, 1933.

— Hansen, Geo. Congdon, J. W. These collectors usually recorded stations for their plant specimens. Sometimes they did not record a specific locality. What a difference it would make in the use of their material if they had always done so!

* Cont. from p. 106. Climate. At end of Nov., 1932, the seasonal deficiency was 3.87 inches, there having been only .60 inch of rain in Berkeley during November.

— L. W. Wigmore, editor of Orland Register, called today. He says: Eucalyptus groves, windbreaks and single trees, killed by the great freeze of Dec. 10, 1932. Not known to what extent trees will recover by crown-sprouting, or regeneration in crown. Orange crop 75 per cent destroyed; the trees also badly injured. Temp. went down to 8° above zero. Lemon orchards killed outright, the lemon being much more sensitive than the orange to low temperatures. Orchards at Orville even more severely injured. — [Jan. 23, 1933.] One nurseryman lost completely a nursery of orange stock — lost all his work ^{or young} for four years; stock just ready to market. Oranges in packing house at Orville destroyed!

-Teratology. Stem showing spiral twisting. Other stems on individual are normal. Spm. of *Sanicula nemoralis* Greene cultivated at Berkeley; label in hand of E. S. Greene. Spirals on side of stem facing one run from the right to the left upward.

- Just called, Miss Margaret Greene, daughter of the youngest son in the Greene family where Edward Lee Greene was the eldest. There were five boys, no girls. The mother, nicknamed Grandall, was the strong and intellectual member of the partnership. The father was a weakling, using the word as used by Miss Greene. All the boys were bright and intellectual and plainly took their strength from the mother. The father was in the Civil War. He and the sons were all in one regi-

ment, the 13th Wisconsin, I think Miss Greene said. The youngest son was too young - much too young to enlist. Later he became a lawyer, owing to the generosity of Edward the eldest. There was 20 years difference between Edward and this youngest son, but a strong affection subsisted between them for life. The youngest son lived in North Dakota. Edward always stopped to see him when crossing the continent. The Greene family lived ^{originally} in Rhode Island; they were Seventh Day Adventists, or as they were called at that time Seventh Day Baptists. The family moved to Illinois; then to Wisconsin; then to a piece of government land just outside Denver, Colorado.

which the Elder Greene had the privilege of taking up as a Civil War veteran. Miss Greene thinks that it was at this time that all the boys entered* the Episcopal Church. Edward spent the last six months or year of his life with his youngest brother in Dakota. Miss Greene says that when he came, he was a very sick man and had shrunk incredibly. He weighed scarcely more than 100 pounds and but for his head of white hair, his brother might not have recognized him when he stepped off the train. The family saw he had not long to live. Edward insisted on returning to Washington for important business and died there of cancer of the stomach.

- Feb. 10, 1933.

* that is joined.

- Miss Greene (see p. 112 ante) has been going around amongst the scenes and visiting the people associated with her uncle Edward. It seems that in the volume "Roads to Rome" Dr. Greene has an article on himself. In this article, if I understood Miss Greene rightly, he tells of or refers to his trip across the Colorado Desert - that in starting on this journey he saw a tombstone marked Edward L. Greene! Miss Greene visited San Diego and found the tombstone in the Mission San Diego precincts! She is now living at Martinez - having had formerly a position in the library there.

- Jos. Ewan, a young botanist, wanted a position at the Univ. of Calif. at Los Angeles. He did not get it. So he went to the ^{Southern} California Academy of Sciences and offered to work for nothing in order to gain experience. "Here", said Prof. Carl Epling, "if you are going to work for nothing, work here in the Univ. Cal. Los Angeles herbarium." So, there he is working. In the slang of the younger generation, he is considered a "shark" on botany, and very accurate as a systematist.

- Mar. 3, '33.

- Teratology. *Oenothera trichocarpa* Nutt. Remarkable case of fasciated plant. Single stem inflated. Coll. by W.S. Childs at Brawley, Mar. 1922; see spec. in hb.

Aug. 21, 1933.

- Carl Pindy just called. He says: "There are a number of leaf forms of *Lewisia cotyledon* which have been named as species. They are all properly put into *L. cotyledon*; they are nothing but leaf forms. In the flowers they are all alike. There is nothing to distinguish them, save in the leaves. *Lewisia howellii*, *L. heuchneri* and *L.* (he named one other) all belong in *L. cotyledon*."

I have been up Cias naybut missed *L. kelloggii*. I looked everywhere over the red rock country but should have looked on granite. I missed it by half-a-mile. *Lewisia pygmaea* is in the high country but is not the real *L. pygmaea*.

what is it? It answers to the description in your flora and in the State Survey Botany, but is not *L. pygmaea*."

"I am 72 years old; feel as well and work as well as when 45." - Aug. 21, 1933.

- "original grass land of Cal. was made up principally of perennial bunch grasses. The ^{great} valleys were a waving sea of perennial grasses in which also were found native clovers and herbs." - Jesse W. Nelson (The Commonwealth, 9:132).

- Dean Walter L. Howard, ^{Phonology,} from Davis called to see my "Burbankiana". He is preparing a critical estimate of Burbank's horticultural products. He had a good deal to say about Burbank's sowers because scientists refused to accept him as a scientist. However, he ^{Burbank,} posed constantly as a

scientist, though knowing that he was never accepted. He had a stormy domestic time with the first Mrs. Burbank from whom he was divorced. - Sept. 13, 1933.

- Conrad V. Marston, ill, on his way home to Washington from Mexico called on me ^{one day} in May '33. ^(from the west coast) He came up by steamer, having been stricken with fever in the mountains. Dr. W.R. Maxon of the National Herbarium had written me in advance of his coming.

- *Asclepias erosa* Torr. A most remarkable case of teratology, the umbel replaced by rays bearing foliaceous flowers: Kenmore, K. Brandegee 1911.

- No. 16,549^a. *Cordylanthus* Aug. 11, 1933.

Cor. whitish with yellowish and purplish markings. Lower pair of filaments ciliate on one side (inner) save near anther and at base; upper pair hairy on one side and almost to base.

No. 16,550^a*

Saw little of this composite on the dry hills in edge of brush.

No. 16,551. *Erigeron inornatus* Gray
var. *viscidulus* Gray.

Composite, with 16,550

No. 16,552. *Daucus carota* L.

Sonoma, By roadside.

August 5.

Aug. 1 - Aug. 7.

* Nos. 16,549 and 16,550, see p. 104, ante.

- Rancho Santa Ana Botanic Garden.

Mrs. Susannah Bryant came to me frequently for counsel in the early days of her garden. In answer to one of her communications I wrote her stating somewhat explicitly what should be the ideals of a botanic garden. Some of my friends thought it a statesman-like letter. She was outraged by it!!

But she couldn't stay away from Berkeley (see ante p. 102). Now she writes, asking me to be a councillor of the garden - and I accept, feeling that this is a duty I should accept, in order that true standards for a ^{botanic} garden may be maintained.

I see now, apparently, that she put me on against her

will! Because my name evidently went on last! She was extremely friendly the last time I saw her - but she has always been that. Nevertheless there is arrogance in her manners to which I cannot ^{readily} accommodate myself. -

Sept. 26, '33.

I imagined that this being a "councillor" indicated that she wishes ^{to consult} me ^{as} to the garden policy as formerly. I now see that she means to have the councillors report to her in person at Anaheim once a year or more! This would be quite a chore! She has made Abrams, Mang, Alice Eastwood and myself ^{of} councillors in botany, while she has councillors in many other subjects!! I notice too that the letter of invitation is the first

Sept. 1933

meeting is a ^{trivial} command rather than an invitation. His meeting, also, is to be in honor of W.S. Swingle, "honorary councillor." Well, many persons regard Swingle very highly, but, while admitting certain abilities, always rate him highly as a botanist. I do not. Certainly I do not feel it a necessity to travel 500 miles to honor him. See Mrs. Bryant's letter Sept. 19, 1933.

- A book-agent, one I.P. Bolton, is selling Abrams' Flora of the Pacific Coast to libraries for \$5.00, the regular price being \$9.00. Bolton gets a discount for himself of 40%, making a net of \$3.00 to the Stanford Press. He says that they have 500 or 600 ^{copies} on hand. - Sept. 1933.

No. 16553. *Erigeron macnabiana* Knoxville Ridge. This was collected on a motor trip from Berkeley to Lower Lake and return via Berryessa Valley and Swiss Valley in Oct. 8, 1933. See p. 200. No. 16553a. See p. 129.

- J. D. Beckwith, Professor of Bacteriology, Univ. Cal. at Los Angeles, called to see me Dec. 28, 1933. He said: Carl Epling is planning, it is said, to go elsewhere to a new position, leaving U.C. at L.A. He is so temperamental that the men find it difficult to get along with him: one day he is very pleasant, another day impossible.

- Trip to Lake Tahoe: June 16, 1931. No account of this trip ^{see ante 52:45,} as to objectives was made at the time, doubtless because engrossed with other things on my return. A fossil *Nymphaea* root had been sent me by Mr. R. P. Sherman, 693 Butter St., S.F., as collected at Lake Tahoe. See *Japson Correspondence*, vol. 30, p. 482, in 1931, where Mrs. R. P. Sherman says that the fossil was found on the

beach at or near Crystal Bay on Lake Tahoe. I drove with Dr. Chaney and the Chaney family to Echo Lake. The weather in the Sacramento Valley was mild but at Echo Lake, whether the family were going for an outing, snow was on the ground and it was very cold and disagreeably cold. One could not get near the fire in the assembly hall at the resort ^(on account of the crowd), food was served in a ^{↑breizing} dining room with open sides and we slept in tents. When I am out in the open with my own outfit I manage to keep comfortable, or at least to keep busy working to be comfortable - but all this was trying though I gave no hint of it. The next day we went around the lake searching for the

fossil locality, or a locality where the plant it was derived from might be found. We went too fast to make any proper search; though at Sausalito Harbor, Crystal Bay, one could not find any proper site for the plant. We returned to Sausalito Lake by four o'clock and then Dr. Chaney ^{suddenly} announced that he and I were to return to Berkeley that day. We did. - See vol. 52, p. 45.

- Carl Purdy just called. He is well and hearty. Has just come from the Gibley Valley at Morgan Hill where he has been employed professionally on a large garden. Said that he walked east to the hills lying between the valley floor and the cañon of Coyote Creek and found on those hills

Feb. 20, 1934.

Fritillaria liliacea, in flower.

Perhaps of the lack of discipline in present day young people he said that in school he had one motto: thoroughness. He taught himself never to be satisfied until he had completely mastered a subject and he did not allow himself to forget it. After he left school and began to teach school he was his own professor and studied one new subject after another. He says that he sought culture - a knowledge of things for their own sake, of things fine and improving for one's self.

He says there is a large evergreen *Lewisia* in the Yosemite region near El Portal. - Feb. 20, 1934.

Purdy now has a grandson, Carlton Mahwin, son of his daughter Mabel, nearly ready for college.

- Prof. W. A. Setchell says: "Amos Eaton was Professor of Chemistry in Rensselaer Polytechnic Institute, Troy, N. Y. He had much to do with chlorine when chlorine was first discovered and exploited as a bleaching agent. He was charged, it is said, with altering the signatures of a will by means of chlorine and was convicted and put in jail at Albany. The jailer's boy ran errands for him, brought him plants and he taught the boy botany. The boy was John Farrey." - Feb. 20, 1934. Eaton's son was a commissary officer in the Civil War; his grandson was Daniel Cady Eaton, Professor of Botany at Yale, specialist on Pteridophyta. - Feb. 28, 1934.

- A rather fine lot of papers in systematic Botany are being turned out under ^{J. M.} Greenman at the Missouri Botanical Garden. The ^{are by grad. students,} papers are mostly very readable and apparently many of them are printed. I suspect the quality is due a good deal to the genius of Greenman. A student, J. A. Styermark went to work on *Manodora*. While Dr. A. B. Grant was in charge, she wrote me that this student had run across my no. 6635 and thought it might be a new genus! It is just large-flowered *M. spinescens*!! cf. letter of A. B. Grant, 12-4-30. This matter illustrates the principle that a bundle mis-filed is a bundle lost. In moving into the Life Sciences Building, the

mix-up of material was great. *Menodora* never got into its proper place. (The genus corn)

I marked the shelf in Oleazar as "genus-corn lost," in 1930. To this day it has not turned up, though I have been over much of the working collection of the flora of California in the last 3½ years. — March 6, 1934. I would like to see my no. 6635 because the field notes indicated that the authors were peculiar.

— Came in today E. C. Bower, Research Associate in Astronomy, to tell about 6-petalled *Eschscholzia californica* on Monument Hill, above the Botanic Garden in Strawberry Canyon. We went up to see his patch. Only 2 flowers were found,

although he said there were many two weeks ago. If possible the colony will be followed up. —

March 26, 1934.

— Today went to Stanford to call on the Peirces. Collected on the Stanford Campus the following:

No. 16,553 a.

March 25, 1934.

— Dr. H. L. Mason just back from a flying trip desert way. Went east by Kane Canon and Walker Pass. He was astonished at the amount of *Yucca* ^{*brevifolia*}, *Camphora candida*, and other desert things mixed with Mexican things, northern things, S. Cal. things. I told him that it is a wonderful meeting ground. Hence to Death Valley and Baker — everything dry. Hence to coast at Purissima. Says *Gilia californica*.

has been quite destroyed by fire, but that *Pinus muricata* is reproducing wonderfully. There to Pacho Hills near San Luis Obispo. Wonderfully dense growth of brush.

The botanizing was good in the Kern Canon and Walker Pass. The Carrizo Plain is dead this year. — April 2, 1934.

— M. E. Jones. Jos. Ewan says that he is practically destitute. Ewan ^(Jones) bought from Jones his set of Muhlenbergia in his library. It seems that when Jones sold his herbarium to Pomona College, the college authorities asked (subsequently) for the his library, but Jones said the library was not included in the sale and kept it. I shall have supposed that he would not be willing to part with Muhlenbergia, but Ewan says that he now uses the collection!! — Apr. 25, 1934. "Jones is hard up," says Ewan.

— Drove to Little Oak this Sunday morning. The country-side is very beautiful in spring dress — but it is, not April 8, but seasonally May 1 or near it, so advanced is the spring! Bennett's Hill is almost as brown as June 1! The soil is very dry, due to lack of a wet winter that the rains were so distributed as to favor spring growth. The fall was long and dry.

✓ No. 16,554. *Geranium*

Little Oak, Vacaville. In the old abandoned garden. Perennial!

✓ No. 16,555. *Sonchus oleraceus*

Little Oak.

✓ No. 16,556. *Robinia pseudacacia* L.

Little Oak. Cultivated.

— *Eucalyptus globulus*. Many of the old trees on the road west of Davis are dead — killed by the frost of Dec. 1932. Others are half-dead, but sprouting.

No. 16, 557. *Trifolium ciliatum* Nutt.
= *T. ciliolatum* Benth.No. 16, 558. *Medicago apiculata* Willd.No. 16, 559. *Brija minor* L.No. 16, 560. *Brodiaea laevis* Wats.
= *B. hyacinthina* Baker.No. 16, 561. *Trifolium variegatum*
Nutt.No. 16, 562. *Trifolium depauperatum*
Desv.No. 16, 563. *Trifolium ciliolatum* Bth.No. 16, 564. *Lupinus bicolor* Lindl.No. 16, 565. *Orthocarpus erianthus* Bth.

Directions from Rio Linda: keep highway (pass)
east; just before wooden bridge turn left (north)
go straight north as far as can, turn east, north
house on left at end of lane. Mott's ranch is
next to Keithley Pasture Lot. See p. 139.

April 10, 1934

No. 16, 566. *Eryngium castracis*
Jepson var. *vallicola* Jepson. Lowest leaves spreading
horizontally or a little ascending,
simple or with 2 to 4 pair of
short pinnal, the pinnal also
fistulose. Fistulose leaves not
dependent on presence of water
in the bog wallows or develop-
ing in very shallow water and
therefore spreading!
No. 16, 567. *Baeria*

- I am now collecting in the Keithley
Pasture Lot about 2 mi. nr. of Rio
Linda, in bog wallow land which
has never been plowed. The lot has
been in the Keithley family since
the early days settlement of the
country and has been little pastured
according to their account. It is
therefore in fairly primitive con-
dition, but has been heavily (Cont. p. 138)

No. 16, 568. *Bromus diandrus* Roth
(det. Beecher Crampton, 3/76)

Forming dense colonies on the
higher spots.

No. 16, 569. *Ptilocarpus brevissimus* Nutt.

This inuloid plant is rather
common in the hog wallows.

No. 16, 570. *Navaretia leucocephala*
Bth. Common, hog wallows.

No. 16, 571. *Downingia bicornuta*
Gray. Two erect somewhat slender
horns at mouth of lower lip opp-
osite the sinuses, two pseudos
horns laterally, these latter result-
ing from folds in the margin
of the lip. Corolla white with central
lavender wedge-shaped spots at tips
of lobes of lower lip. As said
above, the lower lip has 4 horns at mouth
of throat, the lateral formed by infolding
of margin of outer base of lateral lobes,
the other two slender, actual horns and
dark purple; the lateral false horns
light purple. All horns erect, especi-
ally the 2 middle.

No. 16, 572. *Orthocarpus*
Cor. yellow; hog-
wallows.

No. 16, 573. *Plagiobothrys nothofol-*
ius Gray. High ground, forming colonies.

No. 16, 574. *Allocarya stipitata*
Greene var. *microantha* Nutt. Hog wallows.

No. 16, 575. *Brodiaea minor* Wats.
Segments of perianth
rotately spreading. Stamens
involute so as to be nearly semi-
tubular, approximate about the
anthers and twice as long as
the anthers, distinctly notched at
apex! In extremely hard ground
- adobe brick-baked, - hog wallows.
Per. pale purple.

No. 16, 576. *Alopecurus saccatus* Vasey
(det. Beecher Crampton, 3/76)
This grass grew in the
margin of hog wallows.

No. 16,577. *Brodiaea laxa* Wats.
 High ground. Bulbs deep-seated!

No. 16,578. *Sanicula bipinnata*
 H. & A. Very scarce.

No. 16,579. *Ranunculus*
californicus Benth.

No. 16,580. *Scirpus pulchra* Hitchc.
 (det. Beecher Crampton, 3/76)
 (dup. to Crampton)

This grass grew on high ground. Only a few clumps of it comparatively. It is called "Bunch Grass" by Keithley who says it was once abundant.

No. 16,581. *Sanicula bipinnatifida* H. & A. Scarce.

No. 16,582. *Deschampsia danthonioides* (min.)
 (det. Beecher Crampton, 3/76) ^{microscop.}

This grass colonized small spots.

No. 16,583. *Pogogyne zizyphoroides* Bth.
 Hog wallows.

No. 16,584. *Veronica peregrina* L. var.
calapensis St. J. & W. Hog wallows.

No. 16,585. *Layia fremontii* (T. & G.) Gray
 High ground; colonies.

No. 16,586. *Sidalcea Hartwegii* Gray
 Pale lavender corollas. Hog wallows.

No. 16,587. *Trifolium tridentatum*
 Lindl. Colony.

No. 16,588. *Alloccarya greenii* Greene.
 This borage, erect, formed dense but small colonies.

No. 16,589. *Hypochaeris glabra*?
Microseris douglasii Douglasii

No. 16,590. *Poa scabrella* (Thurb.) Benth. ex Vasey
 (det. Beecher Crampton, 3/76)
 (dup. to "1") This grass grew on high ground.

No. 16,591. *Amsinckia Menziesii* ~~Helleri~~ Brand.
 Scarce; high ground.

No. 16,592. *Delphinium variegatum*
 High ground.

No. 16,593. *Lomatium utriculatum*

C. & R.

High ground,

rather scarce.

No. 16,594. *Bromus mollis* L.

(det. Beecher Crampson, 3/26)

Colonies, high ground.

No. 16,595. *Tropidocarpum gracile*

Hook.

Chatterton ranch, on

Dry Creek.

[Cont. from p. 133.] invaded by brama
grasses and by *Erodium corymbosum*.
The latter forms pure colonies, very
even and carpet-like.

I note also:

*Brodiaea capitata**Quercus douglasii* (a few trees);very common on Chatterton
Ranch two miles easterly.*Erodium moschatum* (shade
of oaks).*Erodium corymbosum*. Have never seen
a more solid carpet of it*Hordeum murinum*.*Capsella bursa-pastoris*.*Sisymbrium officinale*.*Lomatium utriculatum*.*Avena fatua**Achyrocline satureioides**Eriogonum nudum*, rank form,
apparently this species.*Chlorogalum pomeridianum*,
basal leaf-tufts only.

- I parked my car at the ranch
of Geo. Matt. He is a graduate
of Univ. Cal. (engineering). He
has here a son John Matt, married,
living also on the place. He had
4 years at Davis. His wife is a
grad. Univ. Calif. They were very
polite and John Matt took me
east about two miles to the Chatter-
ton ranch (pioneer settlers) where
is an oak grove on rolling ground,
never has been plowed. This

groves is chiefly *Quercus douglasii*.

- drove to Little Oak ^{from Berkeley} late this afternoon. On the way up I looked in the edge of the marshes at Suisun for *Glaux maritima* and *Samolus floribundus*. *Glaux maritima* was collected at Suisun by C. F. Baker in 1901. *Samolus floribundus* was found in the Suisun Marshes by J. C. Dary long ago (9-25-1897). ^{of these} Neither did I find at Suisun. Baker records *Glaux maritima* as concealed in the dense growth of other herbage and abundant. *Centunculus minimus* was gathered by Greene at Suisun. I have not found this there. He got it May 2, 1886. *Sporogonium camalinum* L. Suisun (marshes), C. F. Baker. I made notes of a very few common things as occurring in the salt marshes at Suisun, * no. 3247 in 1903.

namely: *Triglochin maritima*, very rank, common. *Frankenia grandifolia*.

Jaumea carnosa
Apium graveolens.

Pennis setivides. Sublett, sta.

Corvus torreyi, that is *C. glabrata*, on the steep bank of Suisun Creek, at the bridge near Thomason. *Scirpus* (no. 76, 739). *Cordelia* see p. 166.

Colusa, May 3, 1934.

Drove ^{from Berkeley} via Vaca Valley, Madison, Gamorra and Harrington to Grimes. On the road east from Harrington, ^{north and south} about 2 miles from main highway, the country road runs along a considerable gully (east and west) on the south side of which is a fence. ^{line} On this fence I saw two shrubs of *Adenostoma fasciculatum*. They are in my opinion weifs, which came down from the hills ^{seed of} west. I see no reason

for thinking them remnants of a larger area. There is quite a strip of wild land, probably never plowed, lying between the wagon trail and the fence and there is no sign of any other individuals in this strip. It is not country where *Adenostoma* would normally flourish. It is heavy loam or semi-slate where root drainage would be poor. I go on to College City (see p. 145). Grimes is a pleasant old-time village with great oaks and walnuts, overarched by its one main street. Along the river banks are fine groves of trees rising - a fine sight after the more or less treeless plains one has just been over.

After Grimes I go on to Colusa and stop the night. It is a

considerable town, an old town with a highly dignified old court house with a pair of large Corinthian pillars in front. I stop at the Hotel Riverside, an old-time brick structure. It is quiet and a block off the main street, near the river levee.

No. 16,596. *Damasonium californicum* Torr.

Swale, in mud, College City.

No. 16,597. *Downingia elegans* Torr.

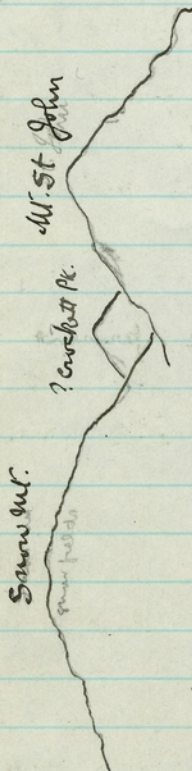
Low spots, College City.

No. 16,598 *Psilocarphus brevicaudatus* Nutt.

This Umboid grows in low spots.
College City.

After dinner in the evening I visit the town* library. I found almost no botany books or natural history books of any kind - one book on the shelves, evidently used a great deal, is Jepson's *Flora of California*.

* It is, I believe, properly the County library



Snow Mountain in northern Lake County is seen across the plain of the Sacramento Valley from near Colusa. Snow Mt. is high; looks high, in spite of its flatish-topped bulk.

May 3, 1934.

- Cont. from middle p. 142. College City is a rather pleasant little village in farming country. It was to have been an educational center some sixty years ago. The Campbellites started a college here - but like most such sectarian efforts, it petered out. As a lad I remember it, because some neighbor's boys were sent there from my valley. The present high school in the village is housed, apparently, in the old college building.

✓ no. 16,599. *Veronica peregrina* L.

Stegeman sta., n. of Colusa.

✓ no. 16,600. *Centromadia purgens* ^{(H. & A.) T. & G.} _{= Nemigonis} ^{gracilis}

Stegeman sta., n. of Colusa.

✓ no. 16,601. *Deschampsia danthonioides* (Trin.) ^{Munro ex Beauv.}
(Det. Becher Grampson, 3/76)
Grass. Stegeman sta.

✓ no. 16,602. *Polypogon monspeliensis* (L.) Desf.
(Det. G. Grampson, 3/76)
Grass. Stegeman sta. (See p. 174.)

- Along the river are fine views.

From Colusa I drive north through a pleasant country, some of it very beautiful rich stretches with fine trees. Near Slegeman rr. sta. I collect *Centronadia pungens* (no. 16,600). See p. 175.*

All through this country since College City there have been mag-pies, one here and there, ^{sometimes several.} in no. 16,603. *Cynodon dactylon* (L.) Pers. ^{Grass on low flats, Princeton} ^(det. G. S. Watson, 3/24) no. 16,604 ^{det. Watson, 3/24} ^{Princeton.} ^{Grass on low flats, Princeton} ^{Princeton.} — Next, the river comes along

the river so that one has a fine view of the broad ^{river} ^{stretch} of the ^{river} banks at this point ^(S. of Jacinto) ten to fifteen feet. On a flat on the other side — rather high but still under high water in time of freshets probably there is a fine somewhat open stand of the tall native trees —

* See p. 178.

Populus fremontii, *Platanus racemosa*, the willows, tall and narrow. After this I come to Jacinto — a dead hope of a town — the brick store closed — about the only building I notice. Next I come to St. John, which is a considerable country school at a junction of roads, seated on the bank of the broad flood stream of Stony Creek!! a stream I know better further west. (Cont. p. 195).

What a fizzle is Hamilton City — so pretentious in its start off — now scarcely more than nothing — a village with a few shops — laid out on a gravel seabed by James Hille who had the gift of causing people to give him money to invest.

- At Hamilton City I turn east and cross the Sacramento River. In the delta between the river and the lower courses of the Pine Creek ^{tributary}, are fine groves of young valley oak. at one of the "creeks", a mile or so from the Sacramento River ^(Gianelli) Bridge, I stop and botanize in the creek bottom. There is *Downingia pulchella* Torr (no. 16,605) with trifoliate lower limb & corolla. There is also in a swale of the creek a dense stand of *Eryngium articulatum* Hook., (no. 16,610), all its early leaves and nearly all at this stage remarkable for the definition of the entire elliptic or suborbicular blade, sometimes almost suggestive of the subcor-

late at base. Mixed with it is another *Eryngium* (no. 16,608) perhaps *E. vaseyi* C. + G., but infrequent as to individuals. This spot yields also nos. 16,606, 16,607, 16,611 and 16,609. Here at this point I turn off the road a few yards and take my lunch.

I run on east a short distance, turn north to Nord; on north by a little frequented but good broad road to the main Chico - Red Bluff highway. A half-mile before reaching ^{it}, I stop and get *Brickellia californica* Lindl. in a twig wallow (no. 16,615 and *B. minor* Wats. no. 16,621 with all its star-like flowers making a great show, the perianth segments tending to rotate, mostly in low ground;

Cana, nr. of, May 4, 1934

Butte Co.

B. coronaria Jepson with darker purple
 flowers making a show on the
 higher gravelly clay soil; this
 one with the open throat like
 campanulate perianth. Here
 also in the low swales, is a
 great quantity of *Eryngium*
pinnatisectum (no. 16,616).

I also find a few plants
 of the rare *Leptotaenia*
anomala ^{C. & H.} (no. 16,617). Possibly I
 might have found more
 by hunting very carefully, but
 some ^{patient} search did not show
 up any more. It is likely
 these rolling gravelly plains
 are its home rather than
 the foothills where first
 found ^{Sierra} by Katharine Cronan.
 (Narrative continued p. 153).
 The above collecting station is $2\frac{1}{2}$ mi.
 nr. of Cana, over the level plain.

near Sacramento River, Nord, May 4, 1934.

Plants collected $1\frac{1}{2}$ mi. s. of Nord,
 Butte Co. in swales of Pine Creek *
 See middle p. 148. May 4, 1934.

- no. 16,605. *Downingia pulchella* Torr.
 no. 16,606. *Lolium multiflorum* L.
 det. Becker Crampton, 3/76) Grass.
 no. 16,607. *Danthonium californicum*
 Torr.
 no. 16,608. *Eryngium roseyi* C. & H.
 Low swale.
 no. 16,609. *Wyethia angustifolia* Nutt.
 Stems many, ascending
 from a basal cluster of leaves,
 each stem 2 to 5-headed. Grassy
 bank.
 no. 16,610. *Eryngium articulatum* Hook.
 See p. 148.

- no. 16,611. *Rorippa (Radicula)*
 no. 16,612. *Minulus tricolor* Hartw.

* The particular swale is Kusal
 Slough, north end of the slough,
 and east of Gianelli Bridge over
 the Sacramento River.

gravelly clay plain with low swales,
2 1/2 mi. W. of Cana. See p. 150.

(A. Gray)

✓ No. 16,613. *Boisduvalia stricta* Greene.
cor. pink.

✓ No. 16,614. *Chlorogalum angustifolium* Kell.

✓ No. 16,615. *Brodiaea californica* Lindl.
See p. 149.

✓ No. 16,616. *Erygium castrae* Jeps.
var. *vallicola* → Jeps.

✓ No. 16,617. *Leptotaenia anovula* C. & R.

✓ No. 16,618.

dry gravelly soil. Composite

✓ No. 16,619. ~~*Gadotia Clarkii* Pursh~~
ssp. *quadrivulnera*

✓ No. 16,620. *Brodiaea coronaria* Jeps.
See p. 150

✓ No. 16,621. *Brodiaea minor* Wats.
See p. 149.

✓ No. 16,622. *Brodiaea*

This seems inter-

mediate between no. 16,620 (stan-

inodia rather short, erect on side

of the open-throated perianth)

and no. 16,621 (staminodia approxi-

mate about central anther cluster,

thus closing throat). In 16,622,

the staminodia approximate the

anthers in a circle and equal them;

in 16,621 the anthers shorter than

the staminodia. I found only one indi-

vidual of 16,622.

From the point where I forked the
highway (p. 149) I follow the highway
northerly to near Las Molinas

turn off it, east side, and drive
northerly through flat farming

country. I stop to collect where

a new bridge spans Big Antel-

ope Creek. (At this point Minimus

guttatus, var. (no. 16,625) makes

a fine show in the gravelly

bottom along the living rapid

stream. I also collect here

Eriophyllum

(no. 16,623) which with fair

golden heads on sprangly

branches colonizes the bank

of the channel and makes

an attractive spot. (See below as below)

✓ No. 16,623. *Eriophyllum lanatum* var.

✓ No. 16,624. *Scutellaria* ^{*grandiflorum* Jeps.}
~~*angustifolia* Pursh.~~

✓ No. 16,625. *Mimulus* ^{*glaucescens*}
~~*guttatus* St. var.~~ See p. 186.

✓ No. 16,626. *Chenopodium* ^{*ambosioides* var.}
~~*anthemicum* L.~~

✓ No. 16,627. *Phacelia californica* Cham.
See p. 185. var. *imbricata* Jeps.

I run north from the bridge* on Antelope Creek $\frac{1}{2}$ mile, turn west back to main highway (about $1\frac{1}{2}$ miles or maybe 2) and join highway at Andrews road station.

From Vina north the valley level is wonderfully beautiful with Valley Oak - a very great deal of it in the fat fields - miles and miles and miles, essentially to Red Bluff.

At Red Bluff I put up at the Hotel Tremont. Room for night \$1.50 (telephone, abundance of fresh linen, stationery, electric reading light at head of bed)!!

* Referring to the bridge mentioned on p. 154.

No. 16, 628. See p. 155 opposite see p. 157.

No. 16, 629. See p. 155 opposite. See p. 157.

May 5, 1934.

I travel west over the winding foothills. Just above Beegum, westerly, on the mountain side, I am stopped by the luxuriant vegetation in a "burn" - great colony of *Emmenanthe penduliflora* in particular.

No. 16, 630. *Emmenanthe penduliflora* Bth. Beegum.

No. 16, 631. *Cryptantha torreyana* Greene. Beegum.

No. 16, 632. *Plagiobothrys tenellus* Gray. Beegum.

No. 16, 633. *Thelypodium lasiophyllum* Greene. Beegum.

No. 16, 634. *Adenostoma fasciculatum* H. & A. seedlings. Beegum.

No. 16, 635. Beegum. Compos.

No. 16, 636. *Stylocline flaginea* Gray Beegum. Funoid.

cont. No. 16, 628.

May 5. On the dry hillside near the schoolhouse described on p. 157.

No. 16, 629.

↑ Cont. May 5. With 16, 628.

From Red Bluff I run west to Beegum through the wide and involved range of foothills covered with a fairly close growth for the most part of *Quercus douglasii*, *Pinus sabiniana* and *Quercus wislizenii*. There is a very great deal of the first two species. Nowhere in the range of these two species do I recall now a greater ^{present} stand of them. The Blue Oak is, however, by no means of large individuals - rather under average size as a whole. The road follows up stream beds and then over the tops of the hills and finally down ^{very} to the bottom of Cottonwood Creek, a fine broad stream, where is a little road station, Beegum, where I have my noon dinner. The food is

abundant, not as bad as might be, with swarms of flies which the young woman who served me fanned away with vigor.

Before reaching Beegum, I descended to a stream bottom where ^{after the bridge} is a ranch, a bridge, and a school ^{within say 50 yds} on the west side of the road. ^{hillside, on} Here, near this point, I collected nos. 16,628 and 16,629 (see p. 155). Also noted *Calochortus variegatus*, *Brodiaea multiflora* (common), *B. laevis*, *Bercis occidentalis*. ^{Here also *Pinus sabiniana*, *Quercus douglasii*, *Quercus wislizenii*.}

After Beegum I climb the range ^{to} to the summit and descended to Wildwood which is a resort, mostly for lumberers, a neat well-kept place of simple buildings or cabins. Here, the road ^{west} is marked closed on account of road work, the road to Forest Glen, and so

I am obliged to detour to Hayfork. Here at Widwood I collect the following:

✓ No. 16, 637. *Tonella tenuella* (Bth.) (Hef.)
Shady woods.

✓ No. 16, 638. *Allyzium pusillum* Greene.

✓ No. 16, 639. *Collinsia grandiflora* Dougl. In moist meadow in an open (valley flat) in the forest.

✓ No. 16, 640. *Argemone*

n. of Shiel, on Hayfork Trinity River
The road to Hayfork is mostly along the steep walls of the cañon of Hayfork Creek, a fairly imposing cañon. The road is narrow, no room to pass a machine over long distances, crooked, the leeway off the edge very slight. I pay strict attention* to my driving and stop to collect only once, No. 16, 640, this species brought by road making, an introduction? [* See p. 173.]

At last I reach the Weaver-ville Road and in a run of about 6 miles reach Hayfork village, lying in the Hayfork Valley. In the valley a little south of the village I collect in a field the following:

✓ No. 16, 641. *Prunus demissa* virginiana L. var. *demissa* (Nutt.) Sarg.
(Hef.) Detr. 2400 ft.

Hayfork village would look alright, like an early-day village, save for the gasoline station with its yellow-painted (shell) structures. The school building is plainly old and I liked it.

Cold Spring, on mountain side sw. of Peanut about 3 mi. See p. 160.
elev. 3212 (B.M.)

✓ No. 16, 642. *Aurelanchia aurifolia* Florida Lindl. Nutt.

✓ No. 16, 643. *Dodecatheon hendersonii* Gray. Open pine forest floor.

✓ No. 16, 644. *Delphinium Sonnei* Greene
Open pine forest floor. Cor. pale.

- Cont. from p. 182. *Phacelia magellanica* Cov. var. *heterophylla* (Pursh.) Jepson.
No. 16, 728

By a good road and easy grade I run ^{from Hayfork} to Peanut, a little hamlet of scattered cabins, and a mile beyond find a gasoline road station, newly built - or rather recent, with the sign Peanut prominently displayed. I stop to talk with the man in charge, F. J. Hoelling. He has some interest in the native things and says his wife has. He tries to describe a native plant called Dutchman's shoe - but I do not seem to recall any plant that would be meant.

I join the road from Wiedemann ^{by way of Cold Springs (p. 159).} in 50 yards and run to Forest Glen, a road station and wayside inn on the South Fork Trinity River. What a beautiful stream it is! Its beauty is very in-

spiring - its wooded banks, the rapid movement of the clear water, the fine reaches of the stream interrupted by the rocky bed, - the forest clad mountains rising above, - all combine to entrance one with the scene. Along the stream are many fine Big-leaf Maple (*Acer macrophyllum*) while on the slopes the eye is met by the mass of Douglas fir (*Pseudotsuga taxifolia*), with *Pinus ponderosa* on the little large-sized benches.

I note also:

- Libocedrus decurrens*,
- Fraxinus europaea* var. *latifolia*.
- Pteris aquilina*
- Symphoricarpos albus*
- Corylus rostrata*
- Cynoglossum grande* Dougl.

*Quercus garryana**Montia perfoliata**Fraxinus oregana**Pinus diversiloba**Whipplea modesta*

Peltiphyllum peltatum, in great
abundance along the stream*
for several miles back.

Castanopsis chrysophylla -

this I noticed in fine trees

between Forest Glen and Sage
Fork Mt.

All through the forest at in-
tervals the green is lightened
by the showy white bracts of
the Western Dogwood (*Cornus am-
plexicaulis*). It never ceases to de-
light our eyes. These airy signals
have an easy grace which never
ceases to charm.

* South Fork Trinity River

May 5, 1934.

I turned into the Forest Service
camp by the bridge at the South
Fork. A little after I made
my camp spot two men, whose
camp I had noticed near the
entrance, when I came in, made
a call upon me. One was
named Miller, the other Emerson.
Apparently they had come from
about Ukiah or Long Valley or
had been associated with
that region of old. Doubtless
hardy men at many things,
splitting Redwood grapevine stakes,
Redwood shakes, tan-bark peeling,
ranch work - they had in the
old days gotten along easily
enough, but these hard times
had "strapped" them. The man
Miller said: "Time was when,
if offered \$5.⁰⁰ a day, I stop-
ped to consider. Now, if I were

offered two dollars, I'd freeze in to the man that made the offer and never let him get away from me."

- ✓ No. 16, 645. *Ranunculus occidentalis* Nutt.
open woods, rocky fls.
- ✓ No. 16, 646. *Calochortus*
tdmiei H. & A. open woods, rocky fls.
- ✓ No. 16, 647. *Iris*
Pale lavender; petals purple and veined, a yellow line in center. Open woods.
- ✓ No. 16, 648. *Silene hookeri* Nutt.
Cor. a true pink; open woods.
- ✓ No. 16, 649. *Lithophragma* ~~*complanatum*~~ *tonella* (Nutt.) Gray
Petals white, lacinate. ~~Woods~~

- About nine o'clock I decided to leave my camp in the forest, find my way to the road that I had traveled in reaching the South Fork, cross the bridge and seek the hotel or little inn for a bed. It is utterly black, one cannot see a few yards and nothing on the ground, but I pick up the faint

- cont p. 171 -

May 5, 1934.

- ✓ No. 16, 650. *Poa bulbosa* L. ^{Trinity Co.} (det. B. Crampton, '76)
grass in shade, forest floor.
- ✓ No. 16, 651. *Melica geyeri* ~~Manro~~ ^{Manro}
grass, shade. (det. Beecher Crampton, 6/76)
- ✓ No. 16, 652. *Festuca reflexa* Buckl. (det. Beecher Crampton, 6/76)
grass, shade.
- ✓ No. 16, 653. *Poa pratensis* L. (det. Beecher Crampton, 7/76)
grass; runners; lowest leaves sometimes spreading horizontally.
- ✓ No. 16, 654. *Valerianella*
Pink cor., truly bilabiate, spreading lower lip with 3 elliptic lobes; erect upper lip emarginate or perhaps shortly lobed.

✓ No. 16, 655.

Cor. white, seemingly regular, but doubtless with some trace of the bilabiate remaining. Stamens 3; style exserted later on in anthesis?

This valerianoid was common in one spot by the bridge and seemed native.

South Fork Mountain, 4075 ft.
Trinity Co

I leave mine host at the inn, Forest Glen (see p. 171) and climb South Fork Mountain by a fine road, that ^{is} it is smooth, not too narrow, and through a beautiful forest with fine streams occasionally plunging down the mountain side.

At last I come near the summit of the mountain to a "prairie", west mountain side, mainly covered with a dense growth of young *Quercus garryana*, uniform stand almost as thick as stalks in a corn field, 10 to 20 feet high, but with some opens. In these opens the botanizing is fine. The prevailing species are:

May 6, 1934

Collinsia (no. 16,657)

Delphinium menziesii (no. 16,663)

Senecio (no. 16,656)

Grass (no. 16,662)

Thermophila menziesii (no. 16,667)

Valerianella (same as no. 16,654).

pink fls.

Valerianella (same as no. 16,655).

white fls.

These gay opens are very delightful, especially under a clear sky, bright sunshine and lambent air. I call this "Oregon Oak prairie".

no. 16,656. *Senecio*

Rather common in the bushy opens.

no. 16,657. *Collinsia grandiflora*
Doug. common in one place.

no. 16,658. *Athyrium pusillus*
greene.

no. 16,659. *Arenaria douglasii* Fenzl.
gravelly (fine) open.

no. 16,660. *Gilia gracilis* Hook.
=*Microsteris*

no. 16,661. *Thermophila parviflora*
Doug.

- ✓ No. 16,662. *Poa scabrella* (Thurb.) ^{Beath. ex} ^{Vasey} ^{Grass}
(det. Beecher Crampin, 7/16)
- ✓ No. 16,663. *Delphinium menziesii* ^{DB.}
- ✓ No. 16,664. *Lathyrus nevadensis* Wats. *
Cor. crimson; banner very
much larger than the short wings
and shorter keel.
- ✓ No. 16,665. *Thermophila parviflora* ^{Dough.}
- ✓ No. 16,666. *Hydrophyllum occidentale* ^{Gray.}
- ✓ No. 16,667. *Thermophila menziesii*
H.A. var. ¹ Cor. blue-lavender, pale.
atomaria Chandler.
- ✓ No. 16,668. *Madia minima* (Gray) ^{Keck}
^{Madrid.}
- ✓ No. 16,669. *Ranunculus occidentalis*
^{Sae. p. 186.}
- ✓ No. 16,670. *Viola purpurea* ^{Kell. 55P}
^{+ypica B. & declined.}
- ✓ No. 16,671.
- ✓ No. 16,672. *Linanthus filipes* ^{Compos.}
^{Greene.}
- ✓ No. 16,673. *Lupinus albifrons* Bth.

Making rather fine spots
in the opens, westerly slope.

* This plant agrees perfectly with Bradshaw's description of *L. nuttallii* Wats.
(cf. Bot. Gaz. 80:242). - I. Dempster.

A short distance from the fine
collecting spot, Oregon oak prairie,
p. 167, I reach the summit
of the mountain, at a spot
marked 4075 feet, and thus
can see off to the south across
the great canon of Mod River
with occasional opens in
its farther slope colored yellow-
gold with *Baeria* ^(cf. no. 16,679) or white
with *Floerkea*. *Floerkea* occupies
an open low wet for beds
and it makes a sort of
pinately-shaped pattern on
the area, showing where the
wettest parts are. I now
start along the side of the
mountain on the westerly
side, constantly entranced
by its fine views and the
great areas of color here
and there.

Along the sides of the mountain
I collect the following:

No. 16,674. *Lomatium utriculatum*
C. & R.

No. 16,675. *Balsamorhiza del-
toidea* Nutt.

No. 16,676. ~~*Echinocystis oregana*~~ ^{*March oregonus (T. & G.) Howell*}
Coryn.
Open slope.

No. 16,677. *Limnanthes douglasii*
R. Br. white. Open slope.

No. 16,678. *Ceanothus integrifolius* H. & A.

With great regret I hasten through
such delightful country.

I note two sharp peaks to the
south-west, rising from between Mad
and Van Duzen rivers, the Red and
Black Lassic Peaks.

In the opens are occasional
fine patches in full flower
of *Lupinus albifrons* (no.
16,673). I note *Asclepias cordifolia*.

Also *Brodiaea capitata*. *Ranunculus*
sp. (perhaps *occidentalis*) makes spots
of yellow on ^{open} shoulders s. of the mt.

(Cont. from p. 164). trail and simply by
my feet follow its winding, through
the forest ^{delicately} until I finally reach
the roadway, which I now take
confidently, cross the bridge and
make my way to the little inn where
I am hospitably received.

The next morning, mine host,
Damgaard by name, a Dane, queries
us: "You are from the University of
California, are you not?" Yes, I rep-
lied, but how did you know that? He
smiled and said: "Oh, everybody in California
knows Professor Jepson the Botanist."
— Well, at least he knows how to pass a
compliment to a guest.

From South Fork Mountain by a good road I reach Mad River where there is a store (Mad River store) by the bridge across the river. Just across the bridge, ^{below Low Gap,} I stop on the hillside to botanize the flowery slopes and collect:

No. 16,679. *Baeria*

Makes broad masses of color seen at a distance, - in "opens".

No. 16,680. *Sanicula bipinnatifida* H.T.A.

No. 16,681.

(Through Low Gap,
- I climb over the mountain) by a good road and thus get across the range which separates the Mad River from the Van Duzen River. A fine stream is the Van Duzen. In its valley is Sims-more Ranch, an old-time stop-

ping place. The road runs along the river a ways, crosses it and climbs a mountain to avoid a great bend of the river. On the westerly slope of this ^{watershed of Little Linn Creek,} mountain I stop to collect some fine *Delphinium*, namely:

No. 16,681. *Delphinium*

No. 16,682.

* Cont. from p. 158. The walls looked as if they were approaching ^{cañon} the vertical.

At this country is very beautiful botanizing - radiant "opens" interspersed with woodlands. But I have no time to stop longer and so, on I go, coming to the Van Duzen River again at Bridgeville, crossing the river there, thence along it to Carlotta, most of the way, perhaps twenty miles through

Scotia, May 8, 1934.

the still more or less primitive forest of Redwood - quite magnificent in places and reminiscent of the old days!

So, I came to Alton, and across the Van Duzen, and then the Eel, to Scotia where I put up at the Howator Hotel.

- Cont. from bottom p. 145

The combination of green fields, wooded river banks and groves of trees is most pleasing. At one point, not far from Stegeman sta., a field of young barley with a few trees scattered over it is backed by the heavily wooded banks of the Sacramento River, above which and not so far away rise the ragged outlines of the summits of the Marysville Buttes. A most engaging view.

Scotia, May 7, 1934

No. 16,683. *Chrysanthemum leucanthemum*
Poir.
Discarded - L.H. in 1965 Compas.

Dyerwille. Humboldt Co.
- *Ceanothus parryi*. *Baccharis pilularis*
rigida ssp.
No. 16,684. *Stachys quercetorum* Hal.

= *M. latifolia* Poir.
No. 16,685. *Myosotis sylvatica*
Hoffm. woods.

No. 16,686. *Trifolium tridentatum*
Lindl.

No. 16,687. *Lathyrus*

*(Cont. from p. 146). I have a nearly new car, new last year, a very attractive roadster model, and it is an unusual experience ^{for me} to attract attention as I travel. At Princeton a man leaves his shop and comes across the road to inspect my car. The whole school deserts play and pours to the roadside to see me pass. So it is everywhere.

No. 16,688. *Erigeron philadelphicus* L.

Rays pink-lavender

No. 16,689.

This sword fern is
of the
the commonest / common things on the
forest floor over considerable areas,
forming heavy clumps.

No. 16,690. *Anemone deltoidea* Hook.
- Pursh. See p. 199.

No. 16,691. *Hydrophyllum tenuipes* ^{Hel.}
Gray. Forming circular colonies
on the forest floor, pure colonies
propagating by rootstocks.

- Great clumps of sword fern on the flat
near the river.

No. 16,692.

This bryophytes grew on
a "burn" in the Redwood forest.

No. 16,693. *Dentaria integrifolia* Nutt.
^{= *D. californica* Nutt. var. *s. nuda*}

var. *tracyi* Jepson. In its living state
this seems in aspect, and
especially in its leaves, quite

different from the S. P. Bay region
thing, - specifically different.

No. 16,694. ~~*Montia*~~ ^{Redwood forest floor.} *sibirica* Howell L.
~~*claytonia*~~

Redwood forest floor.

No. 16,695. *Vancouveria*

Redwood forest floor.

No. 16,696. *Oxalis oreana* var.

tracyi Jepson. Corolla pink,
small. Only ^{the} pink-flowered
form occurs.

- As I work over the edge of Buckeye
Prairie (see p. 198) gathering and studying a
number of excellent things, a man emerges
from the forest by an old road which winds
through the trees up to the prairie from the
main road below. He calls to me and then
says a word about the weather. I move to-
wards him and we fall to talk. He gives
expression to the beauty and largeness of the
view over Bull Creek and says that, about
in the depths of the forest, as he has
been so long, the view is a freeing of the
spirit. He is an artist and asks many
questions about the native plants. He
asks if certain berries on a bush by the
footbridge to the Big Tree are poisonous.
There are no poisonous berries in these
woods, I reply, so far as I know.
Then I leave him. Later, I chance to
be at the Big Tree footbridge (ent. p. 188).

✓ No. 16,697. *Sherardia arvensis* L.

open grassy slope.

✓ No. 16,698. *Valerianella*

Open grassy slope.

✓ No. 16,699. *Linum catharticum* douglasii

R. Br. Cor. white. Open slope.

✓ No. 16,700. *Convolvulus polymorphus* Greene. open grassy slope.✓ No. 16,701. *Sidalcea diploscypha*
Gray.✓ No. 16,702. *Thysanocarpus curvipes*
Hook.✓ No. 16,703. *Ranunculus occidentalis*
Nutt.✓ No. 16,704. *Polygala californica*
Nutt. In woods at border
of Buckeye Prairie.✓ No. 16,705. *Lathyrus torreyi*
Gray. The running rootstocks
are quite fleshy when alive; note
the hooked slender ends.✓ No. 16,706. *Psilocarphus tenellus* Nutt. var. *tenellus*
Jm. loid.✓ No. 16,707. *Veronica*

near the "Big

Tree" by footbridge over Bull Creek.

✓ No. 16,708. *Rubus spectabilis* Pursh.

Berries yellow at this stage. with 16,707

✓ No. 16,709. *Bellis perennis* L.

Compos., with 16,707

— *Plagiobolus*

See 16,738.

No. 16,710. *Festuca subuliflora* Scribn.

(Det. Beecher-Crampton, 7/76)

Grass, in a half open.

✓ No. 16,711. *Carex*

With no. 16,710.

✓ No. 16,712. *Asarum*

Near Buckeye Prairie

in woods.

✓ No. 16,713. *Iris*

Woods near Buckeye Prairie

✓ No. 16,714. *Graphalium*

Heat above Bull

Creek village.

No. 16, 715. *Rubus laciniatus*

Flat above Bull Creek village.

One perfectly enormous plant
covering a dead-bush colony
was observed at Buckeye Prairie.

It was in full flower, with
very large flowers, - a luxur-
iant plant. I started to get
a specimen from it; but I
hesitated. Thousands of bees
are busy over the entire bush,
and when I approach they
come at me threateningly, so
I retreat ingloriously; and
leave the bees to their feeding
ground.

- *Trifolium tridentatum* and *albopurpureum* at
Buckeye Prairie. *Cercosa pacifica* at "Big
Tree". *Clintonia andrewsiana*. *Populus*.
trichocarpa, 125 ft. h! opp. Buckeye Prairie.
Thellium ovatum. *Diplazium aurantiacum*.
Achillea millefolium - *Aralia californica*.
Sisyrinchium bellum - Buckeye Prairie.
- cont. p. 181 -

The following are collected at a
prairie by highway on east side
of road, rising sharply from it;
a very grassy slope.

No. 16, 716. *Lomatium intricatum*
umbellifer.No. 16, 717. *Wyethia angustifolia* Nutt.No. 16, 718. *Trifolium fucatum*
Lindl.No. 16, 719. *Orthocarpus fasci-*
barbatus Gray.No. 16, 720. *Agoseris*
Heads extremely showy.
pale broad,No. 16, 721. *Hemizonia congesta*
ob. var. *luzulaefolia* Jepson

- Cont. from p. 180.

Bull Creek flat at river: *Smilacina*
stellata, *Paeonia densiflora*, *Umbellularia*
californica, *Pteris aquilina*, *Thellium*
grandiflora, *Troutalia europaea* var. *lati-*
folia, *Oxalis oregana* (pink).

- no. 16, 722. *Eriophyllum*
Humboldt Co., Benbow, s. of.
- no. 16, 723. *Erigeron philadelphicus* L.
Humboldt Co., Benbow, s. of.
- no. 16, 724. *Bromus laevipes* Shear
(det. Beecher Crampton, 7/26)
Grass. n. of Lanes Red-
wood flat, nw. Mendocino Co.
- no. 16, 725. *Elymus glaucus* Buckl.
(det. Beecher Crampton, 7/26)
Grass with no. 16, 724.
- no. 16, 726. *Melica harfordii* Boland.
(det. Beecher Crampton, 7/26)
Grass with no. 16, 724.
- no. 16, 727. *Ceanothus incarnus*
T. & G. Squaw Creek, n. Branch
of Rattlesnake Creek, n. Mendocino Co.
- no. 16, 728. *Phacelia californica*
Cham. var. *virgata* ^{Japan. See p. 159.} Open grassy hillsides;
leaves in a broad rosette on the
basal ground, one stem arising from
its center. This stem may be
solitary, or others may develop
after or nearly along with the
first one, in number up to

- twenty-five. Twin Rocks, ^{(near Cummings sta.,} n. Mendocino Co.
no. 16, 729. *Viburnum ellipticum*
Hook. Twin Rocks, ^{on Rattlesnake Creek,} n. Mendocino
Co. Odor very heavy, somewhat offensive.
- no. 16, 730. *Silene californica* Dur.
Laytonville, Long Valley, hills on n.
border, Mendocino Co.
- no. 16, 731. *Pentstemon hetero-*
phyllus Lindl. with 16, 730.
- no. 16, 732. *Calochortus* ^{*amabilis* Pardy} ~~*puber*~~
~~ellus~~ Dougl. Petals hairy
half-way up (inside). Rocky
slope, wooded. Longvale, Mendo-
cino Co.
- no. 16, 733. *Clarkia concinna*
Greene. with 16, 732
- no. 16, 734. *Orthocarpus fasci-*
barbatus Gray.
Hills, 4 mi. n. of Willits.
- no. 16, 735. *Ceanothus integrifolius*
H. & A. Hills n. of Willits. abundant.
on the Douglas fir slopes as
far back as Cummings. Now in fl.

no. 16,736. *Sidalcea diploscypha*
Gray. Walker Valley, between Ukiah
and Ukiah.

no. 16,737. *Delphinium*
with 16,736.

no. 16,738. *Phagiobotrys northofulvus*

Buckeye Prairie, Bull Creek.
May 7, 1934.

This item belongs on p. 178

(Discarded, insect damaged)
no. 16,739. *Eriophyllum lanatum*
Forbes var. *andersonii*

Side hill in openly wooded
country, south of Walker Valley.
Drawing from this.

- *Fragaria californica*, in fruit at
Oysterville, berries delicious.

- The *Quercus garryana* oaks about
Walker Valley are as fine and interesting
as 30 years ago.

- *Quercus chrysolepis*, very fine one, in
fl., tall, on hill between Ukiah Valley and
Hopland.

- Dr. Frederick Clements, Carnegie
Institution, is just in to call
upon me. We had a very pleas-
ant chat for half-an-hour.
We seemed to hit it off very
well this time in contrast to
previous times. Perhaps he
was complaisant and desirous
of being pleasant, certainly as
fast I made every effort
to be genial and courteous.
He goes to Pike's Peak very
soon for June; hails about
the country to observe the
native vegetation before it
is quite destroyed by civil-
ized agencies or industry, gets
back to Santa Barbara, his home
now, in November. - May 17, '34.

- Cont. from p. 153. *Phacelia magellanica*
Cov. var. *calycosa* (Gray) Jipson

- Cont. from p. 168, *Ranunculus* no. 16,669. I am calling this at the moment *R. occidentalis* Nutt. and set it wait until I get back to *Ranunculaceae*. In connection with it I glanced hurriedly at my *R. occidentalis* cover. Certain off-hand impressions, to be considered later: 1. The very long straight beak (Van-couver Isl.); 2. The short beaks in Cal. material, including varieties. 3. The achenes, are they always considerably flattened? 4. Character of the leaves and division of blade; var. *rotundifolius*, is the 3 or more times parting of blade pinnatifid? 4. Can descriptions of leaves be improved? Material in cover seems very diverse.

- Cont. from p. 153. *Mimulus guttatus* var. *glaucescens* (Greene). The herbage of this is remarkably glabrous.

No. 16,740. *Scirpus robustus* Pursh.

Cordelia, Apr. 25, 1934

This item belongs on p. 141 ante.

- Today, May 29, came to me at the lunch table at the Faculty Club, C. D. Shane of Astronomy, who said: "A white-flowered *Rhododendron californicum* has been discovered at Pt. Bragg. The Union Lumber Co. nursery has it in cultivation. The flowers and clusters are a bit larger than in the ordinary form. I found a correspondence between the leaf surface ^(bronze or green) and color form in two forms of *Rhododendron occidentale*."

Followed him Dr. David P. Barrows who spoke of the very fine *Platanus racemosa* trees in a cañon s. of Arroyo Grande, the largest that he knows.

Before these two came Dr. A. T. Legge, who wished to pump me regarding plants in California that cause dermatitis.

(Cut from p. 177 at bottom) and recog^{ize} at once the half-ripe berries as those of *Rubus spectabilis*, the Salmon Berry. So when I go back down the road, I find a path leading into the depths of the Redwood forest. On a tree by the path, on its trunk I fasten a letter addressed to:

"The Artist who paints in these woods,"
giving the information which he desired. In all this vast forest it is a rare chance that the letter will be found - but I leave it on the tree.

Shortly after I get back to Berkeley there comes to me a post card, reading as follows:
"Found note next morning at 8:30 am.
A white object on a tree does not grow.
My curiosity it aroused!
What thrill - a note for me."

yet solely on camping ground,
I thought a warning it was for me.
Glory! a note from the hunter
of God's handiwork!

- W. Lee Moran.

5-8-34.

- Marcus E. Jones, A.M., was killed on Sunday last, June 3, 1934, near Pomona College, or at least in S. Cal., accidentally, presumably in an automobile accident. This is derived from a telegram to Mrs. H. P. Bracelin from a ^{married} daughter. Mrs. Bracelin says that he has two married daughters (resident in Stockton) and a son in Salt Lake. The funeral is to be tomorrow at Pomona, that is Friday, June 8. He was 82 years old last April, says Mrs. B., but very hale and vigorous.

She says also that he has a little printing press and sets the type for running off his "Contributions."
 Cont. p. 194. cf. "Notes on Delano's Cal. + W. Am." p. 144.

Vaca Valley, June 11, 1934

Came to Little Oak on Saturday morning, ^{June 9,} arriving about 1:30 ^{pm.}
 Next morning there were heavy fog banks down Diablo way, due to the cool trade wind.

Next morning the fog tongue was in as far as Rio Vista on the river and lay on the tops of the Vaca Mountains. Tuesday morning the banks are heavier and go up the Sacramento River opposite (and out of sight behind the ^{fog} ^{bars} north of) Elmira.

The ^{fog} ^{bars} tongues hang over Vardam, to the south, apparently. The creeping banks come over the summits

of the Vaca Mountains, where the banks are very heavy, and extend down to the little peak high in ^{nearly} Galio Canyon. North, the heavy banks can be seen as far as Putah Canyon.

Next Tate says: Ed Wolfskill is still living, a very old man. He has a great store of lore regarding early days. John Wolfskill, his father, first worked for Yount in Vaca Valley - pruning Yount's vineyard. Yount would not give him any cuttings from his vineyard, so Wolfskill isecreted a stock and brought them to the place on Putah Creek where he settled. Doubtless these vines, so started were the first in Solano County.

Anthemis cotula, once so abundant throughout all this region, covering hundreds of acres of pasture and grain land in the 1870s, has largely disappeared. I have not been looking for it this trip, but not a single plant has caught my eye.

I am led to putting down this note by seeing a patch of it, after leaving Vaca Valley, in a near Jamez Canyon, to the west of Cordelia.

Lactuca scariola seems not so common as forty years ago.

Doubtless the *Anthemis* has gone out by reason of the low rainfall of the last twenty years.

Opposite the first gate at Little Oak in the Dickie field, is a large patch of root-crown sprouting *Sambucus glauca*. It is an old colony, dating back to

Indian days. For matter of eighty years the field has been plowed and cultivated once a year, or at the least every other year. This field was once rank with Spike-weed (*Centromadia pungens*) — say forty years ago. There is little there now.

Vaca Mts.

(*Arbutus menziesii*)

There are 2 or 3 Madrones in Weldon Cañon says Neat Gale. I must have seen them but do not recall them now. The Madrone, with the Parry Manzanita (*Arctostaphylos manzanita*) are Redwood border or Yellow Pine border trees or shrubs. A Redwood belt plant is *Whipplea modesta* which I have found in Miller Cañon, Vaca Mts. Was Redwood or *Pinus ponderosa* ever in Vaca Mts? Probably. *Osmorhiza ceriseiformis* was collected long ago at Toleros Sprs. by Ralph Platt. Doubtless there are other conatal species to be listed. (Cf. note in

* i.e., ages ago.

** Yes; cf. 10:8 ante

"Happy Days at Little Oak Ranch",
p. 85 (notebook, ms.). Also 10:8
ante.

- Cont. from p. 190, re W. E. Jones.
He was, it seems, returning from an
excursion with the Parish Botanical
Society to Bear Valley in the San
Bernardino Mts. In the streets
of San Bernardino town he was
hit at an intersection by an
auto driven by a young chap
and killed instantly. That is to
say, more explicitly, his Ford
auto (old-time model T) was
struck in the rear, ^{but} on ^(the) side, demol-
ishing the hind portion of the
car, Jones being killed by the
impact. His ashes were buried in
Claremont as I understand.

Mrs. Bracelin says that he was
"crazy" after women, and that
after he was eighty, he wrote

urging a wife of forty, buxom and
good-natured, be provided for him.

His house (cottage) in Clare-
mont was a place of terrible
disorder and equally terrible
stench, says Mrs. Bracelin, who
dared not go in, but stopped
at the front door on account
of the offensiveness of the odor.

- June 28, '34.

It seems to me that, now, I do
not so much condemn Jones, the
border ruffian, as those who encour-
aged him, - persons who on ac-
count of their position felt
that they could not indulge
their hatreds openly.

- Cont. from p. 147. It is ^{now} my remem-
brance that I saw in the gravel
bed of Stony Creek, *Mentzelia laevi-*
caulis, but I made, apparently, no
record of it, in the field book. Its
seeds could well have come down
from the foothills in floods. cf. Fl.
Cal. 2:527. Cont. p. 60 ante.

The Hilgard Herbarium.

To my young eyes this seemed like a large collection. It was housed in the very tall cases, about 14 ft. high, with glass doors that stood on the north side of the room that ^{in 1890's} the new Botany Dept. occupied in South Hall — the large north room on the first floor. It was mainly a mediterranean herbarium — made chiefly in Spain. When Professor Hilgard moved his agricultural department out of South Hall into the agricultural building on the banks of Strawberry Creek, he left behind this herbarium. It seemed to me this might have been taken as a hint that a try might be made to have it incorporated in the general

University Herbarium. At least a suggestion could have been made that if he chose to donate it, the herbarium would be regarded as a valuable and useful addition to the general collection. I feel sure that Hilgard would have been happy to make such a gift. He himself had no especial need for it further, nor any time to use ^{it} in the pressure of his agricultural duties in California.

But Greene, for some reason, did not like Hilgard. He decided his botanical knowledge (although Hilgard was a well-trained botanist) and told Hilgard that we needed the space for the general herbarium. So he made Hilgard take his herbarium away.

Hilgard took it away - to his Agricultural Building. The Agricultural Building. Later on, it burned to the ground - and with it, of course, the Hilgard Herbarium.

- July 10, 1934.

- Solano County, note on the vegetation of, see note book, Happy Days at Little Oak Ranch, vol. 1, page 33.

- Cont. from bottom p. 146 at *.

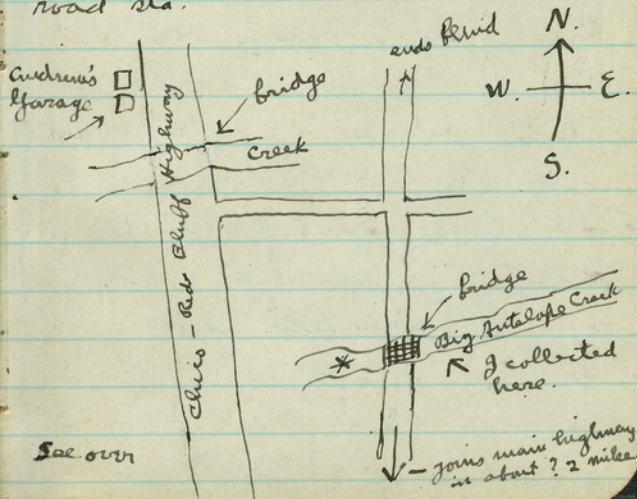
At Princeton I prowled west along the country roads a few miles looking for *Antilocapra colusana* (Daly). All the ranch hands at one ranch stop work and climb up on rangeland points to watch. I also have a new roadster, that persons insist on calling "classy". A man at Princeton stops work in his shop and walks across the street to my parking spot to examine

my car.

- Berks. cont. from p. 176. In the lower flat at Bull Creek there are many large ones. They seem to originate at the base of branches and often grow downward. They are large. One trunk has one large one very

near the ground.

- Cont. from p. 153 at *
- I call this * Big Antelope Creek on this day - so of a boy of 20 at Andrews road Sta.



From the maps I should suppose that the bog (see p. 199) had the creeks reversed as to name, and that "Big Antelope" of my running head (ante p. 153) is "Little Antelope".

- Cont. from bottom p. 121. On this trip we passed the Clark Ranch on the west side of Berryessa Valley. For a note on the history of the Clark Ranch see "Old-time Days in Vaca Valley", p. 109 (one of the Jepson note-books).

- Teratology. see *Draba cuneifolia* Nutt., spm. from Gofbs (Newlon, 587). Drawing with spm.

Sequoia sempervirens
Age: 32, 34, 50, 51
(at Bull Creek + Scotia).

Addresses

- Enoch P. French, Supt. Humboldt State Redwood Park, Eureka.
- Mr. & Mrs. Rex Morton*, Eureka. (Postmaster). San Donald.
- Willis Corbitt, Pacific Lumber Co., Scotia.
- Paul Grothe, Blue Rock ranch.
- Emma Huss ranch, Red Mt.
- Bonsall, Mr. & Mrs. C. P., 500 Arlington Road, Berkeley; ranch on Red Mt.
- F. J. Hoelling, Peanut, Calif.

Field Memoranda

- *Saxifraga rannunuli* Jolia - Spanish Peak.
- Mrs. Geo. Mullins, 515 West Hiller St. Eureka. ^{13th}
Morrison, says she wants in 3 cal. Jan. - Apr. and is free to botanize. See her letter Apr. 10, 1932.
- Mr. & Mrs. C. P. Bonsall, 500 Arlington Road, Berkeley. (of Red Mt., Mendocino Co.)
- *Penstemon fulvum* Nutt. Sierra Valley. ^{austral} Mohawk.
- *Sphagnum* bog Ft. Bragg (3 mi. e.). - Sci. 6-2-3
- *Howellia limosa* coll. 1 mi. N.E. from Guisum in "branches" along m. by K. Brundage. One date = "May 3, 1892"; another = "Apr. 1892".
- *Asclepias obliqua* Nutt. Spring grade, 1927. Pearson. ? donated by Pearson.
- Nell Murbarger, Fort's Crossing, Nevada City. Sent in plants 1934.
- John F. and E. Gray, La Jolla Del Mar.
- See p. 206 of vol. 55.

CALIFORNIA

Rubra vitifolia C. + S.
In cut-over redwood.

Wright, Humboldt Co., 8 Aug., 1932.

W. L. JEPSON, No. 16, 528.

Alt. c. 1500 ft.

Cited: Jepson's 1/1 2, 172